1/71V

Access DB# 79508

SEARCH REQUEST FORM

RECEIVED

NOV - 5 2002

Scientific and Technical Information Center

Requester's Full Name: RGITOMER Examiner #: 65630 (STIC) Date: 11/5/02

Art Unit: 1651 Phone Number 30 8-0732 Serial Number: 09/866,209

Mail Box and Bldg/Room Location: 11B01 / 11D11 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: _____

Inventors (please provide full names): _____

_____

Earliest Priority Filing Date: _____

***For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.**

JAN

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 - 703-308-4498
jan.delaval@uspto.gov

****

STAFF USE ONLY

Searcher: JAN

Searcher Phone #: 4498

Searcher Location: _____

Date Searcher Picked Up: 11/12/02

Date Completed: 11/12/02

Searcher Prep & Review Time: _____

Clerical Prep Time: 15

Online Time: +60

Type of Search

NA Sequence (#) _____

AA Sequence (#) _____

Structure (#) _____

Bibliographic ✓

Litigation _____

Fulltext _____

Patent Family _____

Other _____

Vendors and cost where applicable

STN ✓

Dialog _____

Questel/Orbit _____

Dr.Link _____

Lexis/Nexis _____

Sequence Systems _____

WWW/Internet _____

Other (specify) _____

PTO-1590 (8-01)

WEST

Generate Collection | Print

Search Results - Record(s) 1 through 20 of 36 returned.

☐ 1. Document ID: US 20020177182 A1

L1: Entry 1 of 36 File: PGPB Nov 28, 2002

PGPUB-DOCUMENT-NUMBER: 20020177182
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020177182 A1

TITLE: Methods for the identification of antimicrobial compounds

PUBLICATION-DATE: November 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Selitrennikoff, Claude P.	Evergreen	CO	US	
Nakata, Mitsunori	Denver	CO	US	

US-CL-CURRENT: 435/25; 435/34

ABSTRACT:

The present invention relates to methods to assay 2-amino-2-deoxy-D-glucos-e-6-phosphate ketol-isomerase activity. The present invention also relates to methods for drug screening to identify compounds having antimicrobial activity, wherein the compounds have the ability to inhibit the enzymatic activity of a microbial ketol-isomerase. In other embodiments, methods are provided for the identification of compounds that selectively inhibit microbial ketol-isomerase activity compared to the ketol-isomerase activity of the subject being treated for an infection.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

☐ 2. Document ID: US 20020142422 A1

L1: Entry 2 of 36 File: PGPB Oct 3, 2002

PGPUB-DOCUMENT-NUMBER: 20020142422
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020142422 A1

TITLE: Moss genes from physcomitrella patens encoding proteins involved in the synthesis of amino acids, vitamins, cofactors, nucleotides and nucleosides

PUBLICATION-DATE: October 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Lerchl, Jens	Ladenburg		DE	
Renz, Andreas	Limburgerhof		DE	
Ehrhardt, Thomas	Speyer		DE	
Reindl, Andreas	Birkenheide		DE	
Cirpus, Petra	Mannheim		DE	
Bischoff, Friedrich	Mannheim		DE	
Frank, Markus	Ludwigshafen		DE	
Freund, Annette	Limburgerhof		DE	
Duwenig, Elke	Freiburg		DE	
Schmidt, Ralf-Michael	Kirrweiler		DE	
Reski, Ralf	Oberried		DE	

US-CL-CURRENT: 435/189; 435/320.1, 435/410, 435/69.1, 536/23.2

ABSTRACT:

Isolated nucleic acid molecules, designated MP protein nucleic acid molecules, which encode novel MP proteins from e.g. Phycomitrella patens are described. The invention also provides antisense nucleic acid molecules, recombinant expression vectors containing MP protein nucleic acid molecules, and host cells into which the expression vectors have been introduced. The invention still further provides isolated MP proteins, mutated MP proteins, fusion proteins, antigenic peptides and methods for the improvement of production of a desired compound from transformed cells, organisms or plants based on genetic engineering of MP protein genes in these organisms.

☐ 3. Document ID: US 20020065397 A1

L1: Entry 3 of 36 File: PGPB May 30, 2002

PGPUB-DOCUMENT-NUMBER: 20020065397
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020065397 A1

TITLE: Protecting therapeutic compositions from host-mediated inactivation

PUBLICATION-DATE: May 30, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Roberts, Joseph	Columbia	SC	US	
Sethuraman, Natarajan	Columbia	SC	US	

US-CL-CURRENT: 530/350; 435/4

ABSTRACT:

The present invention relates to a method for determining the modification conditions of a therapeutic agent comprising (1) assaying the biological activity of a first modified therapeutic agent after the first modified therapeutic agent has been administered to a subject; (2) assaying the biological activity of the first modified

therapeutic agent after at least one booster dose of the first modified therapeutic agent has been administered to said subject; (3) carrying out (1) and (2) with an additional modified therapeutic agent that has been modified differently than the first modified therapeutic agent; and (4) comparing the biological activity of the first modified therapeutic agent with the biological activity of the additional modified therapeutic agent. The present invention also relates to modified therapeutic agents.

☐ 4. Document ID: US 20020023281 A1

L1: Entry 4 of 36 File: PGPB Feb 21, 2002

PGPUB-DOCUMENT-NUMBER: 20020023281
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20020023281 A1

TITLE: Expressed sequences of arabidopsis thaliana

PUBLICATION-DATE: February 21, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Gorlach, Jorn	Durham	NC	US	
An, Yong-Qiang	San Diego	CA	US	
Hamilton, Carol M.	Apex	NC	US	
Price, Jennifer L.	Raleigh	NC	US	
Raines, Tracy M.	Durham	NC	US	
Yu, Yang	Martinsville	NJ	US	
Rameaka, Joshua G.	Durham	NC	US	
Page, Amy	Durham	NC	US	
Mathew, Abraham V.	Cary	NC	US	
Ledford, Brooke L.	Holly Springs	NC	US	
Woessner, Jeffrey P.	Hillsborough	NC	US	
Haas, William David	Durham	NC	US	
Garcia, Carlos A.	Carrboro	NC	US	
Kricker, Maja	Pittsboro	NC	US	
Slater, Ted	Apex	NC	US	
Davis, Keith R.	Durham	NC	US	
Allen, Keith	Cary	NC	US	
Hoffman, Neil	Chapel Hill	NC	US	
Hurban, Patrick	Raleigh	NC	US	

and modified organisms are useful for screening of biologically active agents, e.g. fungicides, insecticides, etc.; for elucidating biochemical pathways; and the like.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image | KWIC

☐ 5. Document ID: US 20010051335 A1

L1: Entry 5 of 36 File: PGPB Dec 13, 2001

PGPUB-DOCUMENT-NUMBER: 20010051335
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010051335 A1

TITLE: POLYNUCLEOTIDES AND POLYPEPTIDES DERIVED FROM CORN TASSEL

PUBLICATION-DATE: December 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
LALGUDI, RAGHUNATH V.	CLAYTON	MO	US	
ITO, LAURA Y.	PLEASANTON	CA	US	
SHERMAN, BRADLEY K.	OAKLAND	CA	US	

US-CL-CURRENT: 435/6; 435/69.1

ABSTRACT:

The present invention provides purified, corn tassel-derived polynucleotides (cdps) which encode corn tassel-derived polypeptides (CDPs). The invention also provides for the use of cdps or their complements, oligonucleotides, or fragments in methods for determining altered gene expression, to recover regulatory elements, and to follow inheritance of desirable characteristics through hybrid breeding programs. The invention further provides for vectors and host cells containing cdps for the expression of CDPs. The invention additionally provides for (i) use of isolated and purified CDPs to induce antibodies and to screen libraries of compounds and (ii) use of anti-CDP antibodies in diagnostic assays.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image | KWIC

☐ 6. Document ID: US 20010046694 A1

L1: Entry 6 of 36 File: PGPB Nov 29, 2001

PGPUB-DOCUMENT-NUMBER: 20010046694
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010046694 A1

TITLE: 1-deoxy-D-xylulose-5-phosphate reductoisomerases, and methods of use

PUBLICATION-DATE: November 29, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
Croteau, Rodney B.	Pullman	WA	US	
Lange, Bernd M.	Pullman	WA	US	

US-CL-CURRENT: 435/189; 435/410, 435/69.1, 536/23.2

ABSTRACT:

The present invention relates to isolated DNA sequences which code for the expression of plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein, such as the sequence presented in SEQ ID NO:1 which encodes a 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein from peppermint (Mentha x piperita). Additionally, the present invention relates to isolated plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein. In other aspects, the present invention is directed to replicable recombinant cloning vehicles comprising a nucleic acid sequence which codes for a plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase, to modified host cells transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence of the invention.

☐ 7. Document ID: US 6503729 B1

L1: Entry 7 of 36 File: USPT Jan 7, 2003

US-PAT-NO: 6503729
DOCUMENT-IDENTIFIER: US 6503729 B1

TITLE: Selected polynucleotide and polypeptide sequences of the methanogenic archaeon, methanococcus jannashii

DATE-ISSUED: January 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bult; Carol J.	Bar Harbor	ME		
White; Owen R.	Gaithersburg	MD		
Smith; Hamilton O.	Baltimore	MD		
Woese; Carl R.	Urbana	IL		
Venter; J. Craig	Rockville	MD		

US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 435/325, 536/23.1, 536/23.5

ABSTRACT:

The present application describes selected polynucleotide sequence from the 1.66-megabase pair genome sequence of an autotrophic archaeon, Methanococcus jannaschii, and its 58- and 16-kilobase pair extrachromosomal elements.

107 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 8. Document ID: US 6489100 B1

L1: Entry 8 of 36 File: USPT Dec 3, 2002

US-PAT-NO: 6489100
DOCUMENT-IDENTIFIER: US 6489100 B1

TITLE: Microorganisms and methods for overproduction of DAHP by cloned PPS gene

DATE-ISSUED: December 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Liao; James C.	Los Angeles	CA		

US-CL-CURRENT: 435/6; 435/105, 435/108, 435/200, 435/72, 536/23.2, 536/23.7, 536/24.1

ABSTRACT:

Genetic elements comprising expression vectors and a gene coding for phosphoenol pyruvate synthase is utilized to enhance diversion of carbon resources into the common aromatic pathway and pathways branching therefrom. The overexpression of phosphoenol pyruvate synthase increases DAHP production to near theoretical yields.

10 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 9. Document ID: US 6476212 B1

L1: Entry 9 of 36 File: USPT Nov 5, 2002

US-PAT-NO: 6476212
DOCUMENT-IDENTIFIER: US 6476212 B1

TITLE: Polynucleotides and polypeptides derived from corn ear

DATE-ISSUED: November 5, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lalgudi; Raghunath V.	Clayton	MO		
Ito; Laura Y.	Pleasanton	CA		
Sherman; Bradley K.	Oakland	CA		

US-CL-CURRENT: 536/23.6; 435/6, 536/24.3

ABSTRACT:

The present invention provides purified, corn ear-derived polynucleotides (cdps) which encode corn ear-derived polypeptides (CDPs). The invention also provides for the use of cdps or their complements, oligonucleotides, or fragments in methods for determining altered gene expression, to recover regulatory elements, and to follow inheritance of desirable characteristics through hybrid breeding programs. The invention further provides for vectors and host cells containing cdps for the expression of CDPs. The invention additionally provides for (i) use of isolated and purified CDPs to induce antibodies and to screen libraries of compounds and (ii) use of anti-CDP antibodies in diagnostic assays.

5 Claims, 0 Drawing figures
Exemplary Claim Number: 1

☐ 10. Document ID: US 6444878 B1

L1: Entry 10 of 36 File: USPT Sep 3, 2002

US-PAT-NO: 6444878
DOCUMENT-IDENTIFIER: US 6444878 B1

TITLE: Method of plant selection using glucosamine-6-phosphate deaminase

DATE-ISSUED: September 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Donaldson; Iain A.	Tinglev			DK
Bojsen; Kirsten	Allerod			DK
Jorgensen; Kirsten	Guldborg			DK
Jorsboe; Morten	Nykobing Falster			DK

US-CL-CURRENT: 800/300; 435/320.1, 435/418, 435/419, 435/468, 536/23.2, 536/23.7, 800/278, 800/288, 800/317.2, 800/320.1

ABSTRACT:

A selection method for selecting from a population of plant cells one or more genetically transformed plant cells is described. In the method, the population of plant cells includes selectable genetically transformed plant cells and possible non-transformed plant cells. Each of the selectable genetically transformed plant cells comprises a first expressible nucleotide sequence and optionally a second expressible nucleotide sequence. In the method, a component or a metabolic derivative thereof when present in a low concentration in a medium is a nutrient for both the selectable genetically transformed plant cells and the non-transformed plant cells. In the method, the component or the metabolic derivative thereof when present in a high concentration in a medium is toxic to the non-transformed plant cells. The first nucleotide sequence codes for a gene product having glucosamine-6-phosphate deaminase activity which is capable of converting the component or the metabolic derivative thereof when present in a high concentration in a medium to a nutrient for the selectable genetically transformed plant cells. The method includes the step of introducing the population of plant cells to a medium, wherein the medium includes a high concentration of the component or the metabolic derivative thereof. In the method, the component or the metabolic derivative thereof is a source of both carbohydrate and nitrogen for the selectable genetically transformed plant cells.

25 Claims, 28 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 28

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 11. Document ID: US 6420159 B2

L1: Entry 11 of 36 File: USPT Jul 16, 2002

US-PAT-NO: 6420159
DOCUMENT-IDENTIFIER: US 6420159 B2

TITLE: 1-deoxy-D-xylulose-5-phosphate reductoisomerases, and methods of use

DATE-ISSUED: July 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Lange; Bernd M.	Pullman	WA		

US-CL-CURRENT: 435/233

ABSTRACT:

The present invention relates to isolated DNA sequences which code for the expression of plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein, such as the sequence presented in SEQ ID NO:1 which encodes a 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein from peppermint (Mentha x piperita). Additionally, the present invention relates to isolated plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein. In other aspects, the present invention is directed to replicable recombinant cloning vehicles comprising a nucleic acid sequence which codes for a plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase, to modified host cells transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence of the invention.

4 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 12. Document ID: US 6395299 B1

L1: Entry 12 of 36 File: USPT May 28, 2002

US-PAT-NO: 6395299
DOCUMENT-IDENTIFIER: US 6395299 B1

TITLE: Matrices for drug delivery and methods for making and using the same

DATE-ISSUED: May 28, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Babich; John W.	Scituate	MA		
Zubieta; Jon	Syracuse	NY		
Bonavia; Grant	Kensington	MD		

US-CL-CURRENT: 424/484

ABSTRACT:

In one aspect, biocompatible matrices such as sol-gels encapsulating a reaction center may be administered to a subject for conversion of prodrugs into biologically active agents. In certain embodiments, the biocompatible matrices of the present invention are sol-gels. In one embodiment, the enzyme L-amino acid decarboxylase is encapsulated and implanted in the brain to convert L-dopa to dopamine for treatment of Parkinson's disease.

140 Claims, 13 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

☐ 13. Document ID: US 6372476 B1

L1: Entry 13 of 36 File: USPT Apr 16, 2002

US-PAT-NO: 6372476
DOCUMENT-IDENTIFIER: US 6372476 B1

TITLE: Polypeptides having glucose isomerase activity and nucleic acids encoding same

DATE-ISSUED: April 16, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Belguith; Karima Srih	Sfax			TN
Ellouz; Radhouane	Sfax			TN
Bejar; Samir	Sfax			TN

US-CL-CURRENT: 435/233; 435/252.3, 435/252.35, 435/320.1, 536/23.2

ABSTRACT:

Disclosed are isolated polypeptides having glucose isomerase activity selected from:

(a) a polypeptide having an amino acid sequence which has at least 95% identity with amino acids of SEQ ID NO:2;

(b) a variant of the polypeptide having an amino acid sequence of SEQ ID NO:2 comprising a substitution, deletion, and/or insertion of one or more amino acids;

(c) a fragment of (a) that has glucose isomerase activity; and

(d) a polypeptide having a pH optimum in the range of 5.7 to 6.3 at 60.degree. C., a

pH optimum in the range of 6.1 to 6.7 at 90.degree. C and a temperature optimum of above 90.degree. C. Also disclosed are isolated nucleic acid sequences encoding the polypeptides, nucleic acid constructs, vectors, and host cells comprising the nucleic acid sequences as well as methods for producing and using the polypeptides.

5 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw. Desc | Image KWIC

☐ 14. Document ID: US 6355450 B1

L1: Entry 14 of 36 File: USPT Mar 12, 2002

US-PAT-NO: 6355450
DOCUMENT-IDENTIFIER: US 6355450 B1

TITLE: Computer readable genomic sequence of Haemophilus influenzae Rd, fragments thereof, and uses thereof

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Fleischmann; Robert D.	Gaithersburg	MD		
Adams; Mark D.	N. Potomac	MD		
White; Owen	Gaithersburg	MD		
Smith; Hamilton O.	Towson	MD		
Venter; J. Craig	Potomac	MD		

US-CL-CURRENT: 435/69.1; 435/252.3, 435/320.1, 435/851, 536/23.1, 536/23.7, 536/24.32, 536/24.33

ABSTRACT:

The present invention provides the sequencing of the entire genome of Haemophilus influenzae Rd, SEQ ID NO: 1. The present invention further provides the sequence information stored on computer readable media, and computer-based systems and methods which facilitate its use. In addition to the entire genomic sequence, the present invention identifies over 1700 protein encoding fragments of the genome and identifies, by position relative to a unique Not I restriction endonuclease site, any regulatory elements which modulate the expression of the protein encoding fragments of the Haemophilus genome.

88 Claims, 47 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 47

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw. Desc | Image KWIC

☐ 15. Document ID: US 6281017 B1

L1: Entry 15 of 36 File: USPT Aug 28, 2001

US-PAT-NO: 6281017
DOCUMENT-IDENTIFIER: US 6281017 B1

TITLE: 1-deoxy-d-xylulose-5-phosphate reductoisomerases and method of use

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Croteau; Rodney B.	Pullman	WA		
Lange; Bernd M.	Pullman	WA		

US-CL-CURRENT: 435/468; 435/189, 435/233, 435/320.1, 435/410, 435/476

ABSTRACT:

The present invention relates to isolated DNA sequences which code for the expression of plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein, such as the sequence presented in SEQ ID NO:1 which encodes a 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein from peppermint (Mentha x piperita). Additionally, the present invention relates to isolated plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase protein. In other aspects, the present invention is directed to replicable recombinant cloning vehicles comprising a nucleic acid sequence which codes for a plant 1-deoxy-D-xylulose-5-phosphate reductoisomerase, to modified host cells transformed, transfected, infected and/or injected with a recombinant cloning vehicle and/or DNA sequence of the invention.

17 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWMC
Draw. Desc | Image

☐ 16. Document ID: US 5998420 A

L1: Entry 16 of 36 File: USPT Dec 7, 1999

US-PAT-NO: 5998420
DOCUMENT-IDENTIFIER: US 5998420 A

TITLE: Method for treating Mycobacterium tuberculosis

DATE-ISSUED: December 7, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Grandoni; Jerry	Haddonfield	NJ		

US-CL-CURRENT: 514/256; 514/601, 514/603, 514/924

ABSTRACT:

The present invention is directed to a method for treating tuberculosis in a mammal which comprises administering to the mammal a therapeutically effective amount of an

inhibitor compound that inhibits an enzyme in the branched chain amino acid biosynthetic pathway in Mycobacterium tuberculosis.

10 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image KWIC

☐ 17. Document ID: US 5994629 A

L1: Entry 17 of 36 File: USPT Nov 30, 1999

US-PAT-NO: 5994629
DOCUMENT-IDENTIFIER: US 5994629 A

TITLE: Positive selection

DATE-ISSUED: November 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Bojsen; Kirsten	Alleroed			DK
Donaldson; Iain	Tinglev			DK
Haldrup; Anna	Soborg			DK
Joersboe; Morten	Nykoebing Falster			DK
Kreiberg; Jette D.	Roskilde			DK
Nielsen; John	Copenhagen K			DK
Okkels; Finn T.	Roskilde			DK
Petersen; Steen G.	Rodovre			DK
Whenham; Robert J..	Exeter			GB

US-CL-CURRENT: 800/298; 435/419, 435/468, 800/278, 800/320.1

ABSTRACT:

A method of selecting genetically transformed cells from a population of cells comprising introducing a desired nucleotide sequence and a co-introduced nucleotide sequence into the genome of a cell whereby the desired nucleotide sequence or the co-introduced nucletoide sequence induces a positive effect by giving the transformed cells a competitive advantage when the population of cells are supplied with an inactive compound thereby allowing the transformed cells to be identified and selected from the non-transformed cells by means defined as positive selection; as well as cells transformed according to the method and plants derived therefrom. The invention further relates to novel glucuronide compounds including cytokinin glucuronide compounds for use in the method.

30 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image KWIC

☐ 18. Document ID: US 5993801 A

L1: Entry 18 of 36 File: USPT Nov 30, 1999

US-PAT-NO: 5993801
DOCUMENT-IDENTIFIER: US 5993801 A

TITLE: Gene therapy using stromal cells

DATE-ISSUED: November 30, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Greenberger; Joel S.	Lincoln	MA		
Levine; Peter H.	Worcester	MA		

US-CL-CURRENT: 424/93.21; 424/93.1, 424/93.2, 514/44

ABSTRACT:

A method of causing production and secretion into the bloodstream of a human patient of a biologically active enzyme for which the human patient suffers a deficiency; the method involves introducing into the human patient donor bone marrow stromal cells which have been transfected with a gene encoding the enzyme, so that the introduced cells can adhere to a bone cavity surface of the patient and produce and secrete the active enzyme.

20 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

☐ 19. Document ID: US 5985617 A

L1: Entry 19 of 36 File: USPT Nov 16, 1999

US-PAT-NO: 5985617
DOCUMENT-IDENTIFIER: US 5985617 A

TITLE: Microorganisms and methods for overproduction of DAHP by cloned PPS gene

DATE-ISSUED: November 16, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Liao; James C.	Los Angeles	CA	90024	

US-CL-CURRENT: 435/72; 435/108, 435/200, 536/23.7, 536/24.1

ABSTRACT:

Genetic elements comprising expression vectors and a gene coding for phosphoenol pyruvate synthase is utilized to enhance diversion of carbon resources into the common aromatic pathway and pathways branching therefrom. The overexpression of phosphoenol pyruvate synthase increases DAHP production to near theoretical yields.

29 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image | KWIC

☐ 20. Document ID: US 5906925 A

L1: Entry 20 of 36 File: USPT May 25, 1999

US-PAT-NO: 5906925
DOCUMENT-IDENTIFIER: US 5906925 A

TITLE: Microorganisms and methods for overproduction of DAHP by cloned pps gene

DATE-ISSUED: May 25, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Liao; James C.				

US-CL-CURRENT: 435/72; 435/108, 435/200, 536/23.7, 536/24.1

ABSTRACT:

Genetic elements comprising expression vectors and a gene coding for phosphoenol pyruvate synthase is utilized to enhance diversion of carbon resources into the common aromatic pathway and pathways branching therefrom. The overexpression of phosphoenol pyruvate synthase increases DAHP production to near theoretical yields.

28 Claims, 14 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image | KWIC

Generate Collection | Print

Term	Documents
KETOL.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	331
KETOLS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	237
ISOMERASE.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	6271
ISOMERASES.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	984
CANDIDA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	16891
CANDIDAS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	32
MICROB$	0
MICROB.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	2121
MICROBA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	2
MICROBABRICATED.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	2
MICROBAC.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	5
(KETOL AND ISOMERASE AND (MICROB$ OR FUNG$ OR CANDIDA)).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	36

There are more results than shown above. Click here to view the entire set.

Display Format: - Change Format

Previous Page Next Page

WEST

Generate Collection | Print

Search Results - Record(s) 21 through 36 of 36 returned.

☐ 21. Document ID: US 5852196 A

L1: Entry 21 of 36 File: USPT Dec 22, 1998

US-PAT-NO: 5852196
DOCUMENT-IDENTIFIER: US 5852196 A

TITLE: 12,13,17-trihydroxy-9(z)-octadeoenoic acid and derivatives and microbial isolate for production of the acid

DATE-ISSUED: December 22, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hou; Ching T.	Peoria	IL		

US-CL-CURRENT: 554/103; 435/134, 435/135, 435/146, 435/252.1, 435/252.7, 435/842, 554/108, 554/213, 554/223, 554/225, 554/226, 554/229

ABSTRACT:

A novel compound, 12,13,17-trihydroxy-9(Z)-octadecenoic acid (THOA) was produced from linoleic acid by microbial transformation at 25% yield. The newly isolated microbial strain catalyzing this transformation was identified as Clavibacter sp. ALA2 (Accession No. NRRL B-21660). THOA and its derivatives have application as antifungal agents.

6 Claims, 1 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

☐ 22. Document ID: US 5849287 A

L1: Entry 22 of 36 File: USPT Dec 15, 1998

US-PAT-NO: 5849287
DOCUMENT-IDENTIFIER: US 5849287 A

TITLE: Gene therapy using stromal cells

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Greenberger; Joel S.	Lincoln	MA		
Levine; Peter H.	Worcester	MA		

US-CL-CURRENT: 424/93.21; 435/320.1

ABSTRACT:

A method of causing production and secretion into the bloodsream of a human patient of a biologically active enzyme for which the human patient suffers a deficiency; the method involves introducing into the human patient donor bone marrow stromal cells which have been transfected with a gene encoding the enzyme, so that the introduced cells can adhere to a bone cavity surface of the patient and produce and secrete the active enzyme.

11 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

☐ 23. Document ID: US 5384257 A

L1: Entry 23 of 36 File: USPT Jan 24, 1995

US-PAT-NO: 5384257
DOCUMENT-IDENTIFIER: US 5384257 A

TITLE: Glucose isomerases with an altered pH optimum

DATE-ISSUED: January 24, 1995

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lambeir; Anne-Marie	Heverlee			BE
Lasters; Ignace	Antwerp			BE
Mrabet; Nadir	Hoeilaart			BE
Quax; Wilhelmus J.	Voorschoten			NL
Van der Laan; Jan M.	Groningen			NL
Misset; Onno	Delft			NL

US-CL-CURRENT: 435/234; 435/252.3, 435/252.33, 435/69.1, 536/23.2

ABSTRACT:

A method for selecting amino acid residues is disclosed which upon replacement will give rise to an enzyme with an altered pH optimum. The method is specific for metalloenzymes which are inactivated at low pH due to the dissociation of the metal ions. The method is based on altering the pK.sub.a of the metal coordinating ligands or altering the K.sub.ass for the metal binding. New glucose isomerases with an altered pH optimum are provided according to this method. These altered properties enable starch degradation to be performed at lower pH values.

15 Claims, 24 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw. Desc | Image | KWIC

☐ 24. Document ID: US 5376536 A

L1: Entry 24 of 36 File: USPT Dec 27, 1994

US-PAT-NO: 5376536
DOCUMENT-IDENTIFIER: US 5376536 A

TITLE: Glucose isomerase enzymes and their use

DATE-ISSUED: December 27, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Quax; Wilhemus J.	VB Voorschoten			NL
Luiten; Rudolf G. M.	KR Leiden			NL
Schuurhuizen; Paul W.	NT Delft			NL
Mrabet; Nadir	Hoeilaart			BE

US-CL-CURRENT: 435/100; 435/234, 435/827, 536/23.2

ABSTRACT:

New mutant glucose isomerases are provided exhibiting improved properties under application conditions. These glucose isomerases are obtained by expression of a gene encoding said enzyme, having an amino acid sequence which differs at least in one amino acid from the wildtype glucose isomerase. Preferred mutant enzymes are those derived from Actinoplanes missouriensis glucose isomerase.

8 Claims, 38 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 33

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw. Desc | Image | KWIC

☐ 25. Document ID: US 5340738 A

L1: Entry 25 of 36 File: USPT Aug 23, 1994

US-PAT-NO: 5340738
DOCUMENT-IDENTIFIER: US 5340738 A

TITLE: Modified prokaryotic glucose isomerase enzymes with altered pH activity profiles

DATE-ISSUED: August 23, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lambeir; Anne-Marie	Heverlee			BE
Lasters; Ignace	Antwerp			BE
Mrabet; Nadir	Hoeilaart			BE
Quax; Wilhelmus J.	Voorschoten			NL
Van der Laan; Jan M.	Groningen			NL
Misset; Onno	Delft			NL

US-CL-CURRENT: 435/234; 435/252.3, 435/252.33, 435/488, 435/69.1, 536/23.2

ABSTRACT:

A method for selecting amino acid residues is disclosed which upon replacement will give rise to an enzyme with an altered pH optimum. The method is specific for metalloenzymes which are inactivated at low pH due to the dissociation of the metal ions. The method is based on altering the pK.sub.a of the metal coordinating ligands or altering the K.sub.ass for the metal binding. New glucose isomerases with an altered pH optimum are provided according to this method. These altered properties enable starch degradation to be performed at lower pH values.

13 Claims, 24 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

☐ 26. Document ID: US 5334382 A

L1: Entry 26 of 36 File: USPT Aug 2, 1994

US-PAT-NO: 5334382
DOCUMENT-IDENTIFIER: US 5334382 A

TITLE: Lyophilized polyethylene oxide modified catalase composition, polypeptide complexes with cyclodextrin and treatment of diseases with the catalase compositions

DATE-ISSUED: August 2, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Phillips; Christopher P.	Doylestown	PA		
Snow; Robert A.	West Chester	PA		

US-CL-CURRENT: 424/94.3; 424/78.03, 424/78.04, 424/78.05, 424/78.38, 424/94.4, 435/188, 435/189, 435/192

ABSTRACT:

Disclosed are lyophilized biologically active proteinaceous compositions containing low diol polyalkylene oxide, such as polyethylene glycol, covalently attached to a biologically active proteinaceous substance and combined with the cryoprotectant cyclodextrin.

28 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw. Desc | Image KWIC

☐ 27. Document ID: US 5310665 A

L1: Entry 27 of 36 File: USPT May 10, 1994

US-PAT-NO: 5310665
DOCUMENT-IDENTIFIER: US 5310665 A

TITLE: Glucose isomerases having altered substrate specificity

DATE-ISSUED: May 10, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lambeir; Anne-Marie	Heverlee			BE
Lasters; Ignace	Antwerpen			BE
Quax; Wilhemus J.	Voorschoten			NL
Van der Laan; Jan M.	Groningen			NL

US-CL-CURRENT: 435/94; 435/234

ABSTRACT:

A method for selecting amino acid residues is disclosed which upon replacement will give rise to an enzyme with an altered substrate specificity. New mutant glucose isomerases with an altered substrate specificity are provided according to this method. These altered properties are useful in starch degradation and in other sugar conversion reactions.

16 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw. Desc | Image KWIC

☐ 28. Document ID: US 5290690 A

L1: Entry 28 of 36 File: USPT Mar 1, 1994

US-PAT-NO: 5290690
DOCUMENT-IDENTIFIER: US 5290690 A

TITLE: Methods and means for controlling the stability of proteins

DATE-ISSUED: March 1, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mrabet; Nadir	Koekelberg			BE
Lasters; Ignace	Perk			BE
Stanssens; Patrick	St.-Denijs-Westrem			BE
Matthyssens; Gaston	St.-Genesius-Rhode			BE
Wodak; Shoshana	Brussels			BE
Quax; Wilhelmus J.	Voorschoten			NL

US-CL-CURRENT: 435/189; 435/191, 435/192, 435/69.1, 536/23.2

ABSTRACT:

The invention pertains to a method for the production of a biologically active modified protein derived from a starting protein having essentially the same kind of biological activity with an attendant modulation effect on, particularly increase of, the stability as compared with that of the starting protein. The method comprises substituting an arginine residue for a lysine residue of the starting protein at a site that can sterically accommodate the substitution, without substantially altering the biological activity of the starting protein, said site being preferably of low solvent accessibility, at interfaces between domains or sub-units of the starting protein.

12 Claims, 40 Drawing figures
Exemplary Claim Number: 3
Number of Drawing Sheets: 35

☐ 29. Document ID: US 5266475 A

L1: Entry 29 of 36 File: USPT Nov 30, 1993

US-PAT-NO: 5266475
DOCUMENT-IDENTIFIER: US 5266475 A

TITLE: Glucose isomerases with improved affinity for D-glucose

DATE-ISSUED: November 30, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lee; Chanyong	San Francisco	CA		
Bagdasarian; Michael	Haslett	MI		
Zeikus; J. Gregory	Okemos	MI		
Meng; Menghsiao	East Lansing	MI		

US-CL-CURRENT: 435/234; 435/842

ABSTRACT:

A genetically engineered glucose isomerase with improved affinity for D-glucose and the method of preparation of such a glucose isomerase are disclosed. The glucose isomerase is obtained by mutagenizing the gene of a naturally occurring glucose isomerase such that a smaller amino acid replaces a larger amino acid in the catalytic site. In an especially advantageous embodiment of the present invention,

the Clostridium glucose isomerase sequence is mutated and the residue replaced with a smaller amino acid is either Trp.sub.139 or Val.sub.186.

10 Claims, 1 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

☐ 30. Document ID: US 5168056 A

L1: Entry 30 of 36 File: USPT Dec 1, 1992

US-PAT-NO: 5168056
DOCUMENT-IDENTIFIER: US 5168056 A

TITLE: Enhanced production of common aromatic pathway compounds

DATE-ISSUED: December 1, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Frost; John W.	Lafayette	IN		

US-CL-CURRENT: 435/472; 435/183, 435/193, 435/320.1

ABSTRACT:

A genetic element comprising an expression vector and a gene coding for transketolase is utilized to enhance diversion of carbon resources into the common aromatic pathway.

19 Claims, 6 Drawing figures
Exemplary Claim Number: 8
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

☐ 31. Document ID: US 4959212 A

L1: Entry 31 of 36 File: USPT Sep 25, 1990

US-PAT-NO: 4959212
DOCUMENT-IDENTIFIER: US 4959212 A

TITLE: Oxidizing-energizing composition and method for the treatment of diabetes

DATE-ISSUED: September 25, 1990

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Stancesco; Alexandra	River Edge	NJ	07661	
Spiliadis; Apostol	Bloomfield	NJ	07003	
Dumas; Theodore	London			CA

US-CL-CURRENT: 424/94.1; 424/94.2, 424/94.4, 424/94.5, 514/44, 514/45, 514/46, 514/47, 514/48, 514/49, 514/50, 514/51, 514/52, 514/866

ABSTRACT:

A non-toxic, oxidizing-energizing composition suitable for use as an accelerator of the carbohydrate oxidative degradation metabolic process or the direct oxidation of glucose which consists essentially of, by weight, (A) 10% to 95% of flavine-adenine dinucloeotide coenzyme (FAD) and (B) 10% to 95% of at least one coenzyme or enzyme selected from the group consisting of flavine mononucleotide coenzyme (FM), ubiquinone coenzyme (UBQ), uridine 5'-triphosphate coenzyme (UTP), triphosphopyridine nucleotide coenzyme (TPN), diphosphopyridine nucleotide coenzyme (DPN), adenosine triphosphate coenzyme (ATP), uridine diphosphate glucose coenzyme (UDPG), guanosine 5'-triphosphate coenzyme (GTP), glucose oxidase enzyme (GOD) and mixtures thereof; and (C) 0% to less than 50% of an enzyme selected from the group consisting of fructosediphosphate aldolase, phosphofructokinase, hexokinase, glucokinase, glucose 6-phosphate dehydrogenase, glucose phosphate isomerase, d-glucose-phosphotransferase and mixtures thereof, said composition being effective to reduce the blood glucose concentration in a human body afflicted with diabetes. A further aspect of the invention comprises the combination of 1 mg. to 100 mg. of the foregoing oxidizing-energizing composition with a daily dosage of an antidiabetic drug in an amount effective to lower the blood glucose concentration in the human body, said combination yielding a blood glucose concentration which is lower than the concentration produced by the antidiabetic drug alone as well as a method of lowering the blood glucose concentration in the human body comprising the step of administering the oxidizing-energizing composition in combination with the daily dosage of an antidiabetic drug.

21 Claims, 0 Drawing figures
Exemplary Claim Number: 1

☐ 32. Document ID: US 4857339 A

L1: Entry 32 of 36 File: USPT Aug 15, 1989

US-PAT-NO: 4857339
DOCUMENT-IDENTIFIER: US 4857339 A

TITLE: Method for making cereal products naturally sweetened with fructose

DATE-ISSUED: August 15, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Maselli; John A.	Winston-Salem	NC		
Neidleman; Saul L.	Oakland	CA		
Antrim; Richard L.	Sparta	NJ		
Johnson; Richard A.	Clinton	IA		

US-CL-CURRENT: 426/28; 426/31, 426/44, 426/462, 426/463, 426/52, 426/619, 426/621, 435/94, 435/96, 435/99

ABSTRACT:

Breakfast cereals are sweetened by treating cereal grains or at least one cereal grain fraction such as bran, with enzymes comprising glucoamylase and glucose isomerase to produce fructose while retaining cereal particle discreteness or integrity. Enzymatic treatment with alpha-amylase may be initiated prior to, during, or after cooking. The enzymatically treated, cooked cereal grains are formed into breakfast cereal shapes and the enzymes are inactivated to provide a shelf-stable cereal product. The cereal products exhibit a sweet, pleasing complex-honey-like taste and aroma. Producing fructose provides a greater level of sweetness for a given amount of starch conversion into low molecular weight reducing sugars such as mono- and di-saccharides. In achieving a given level of sweetness, more starch or high molecular weight dextrins may be retained for their matrix forming ability or for improved machineability of the enzymatically treated cereal grains into breakfast cereal shapes. The naturally sweetened cereal products of the present invention may be in shredded, flaked, ground, or extruded form.

44 Claims, 0 Drawing figures
Exemplary Claim Number: 1

33. Document ID: US 4613377 A

L1: Entry 33 of 36 File: USPT Sep 23, 1986

US-PAT-NO: 4613377
DOCUMENT-IDENTIFIER: US 4613377 A

TITLE: Production of fructose syrup

DATE-ISSUED: September 23, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Yamazaki; Hiroshi	Nepean, Ontario K2H 5W5			CA
Matsumoto; Kouchi	Ottawa, Ontario			CA

US-CL-CURRENT: 127/39; 127/46.2, 127/55, 127/69

ABSTRACT:

Novel, highly useful, sweet fructose-containing syrups also containing fructooligosaccharides are provided herein by the partial or substantially complete hydrolysis of inulin. The process includes first providing an aqueous solution containing inulin from Jerusalem artichoke tubers or chicory roots. Then the warm aqueous solution of inulin is passed through a column containing a strong acid cation-exchange resin, thereby providing an effluent having a pH of about 2.0-about 3.0. The effluent is then hydrolyzed by heating at a temperature of about 70.degree.-about 100.degree. C., and the hydrolyzate is passed through a column containing of about 6.5-about 7.0. resin, thereby providing an effluent having a pH about 6.5-about 7.0. Optionally, after the hydrolysis step, the hydrolyzate is decolorized by contact with activated or granular charcoal. The effluent is then concentrated to a syrup containing less water than the effluent, e.g. one containing about 40-about 70% solids. The sweet fructose syrup containing oligofructans can be

used as truly "health" sweetener, particularly ideal for elderly people and diabetics. The pulp obtained after the juice extraction is rich in protein and can be used as feed.

19 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image | KWIC

☐ 34. Document ID: US 4347322 A

L1: Entry 34 of 36 File: USPT Aug 31, 1982

US-PAT-NO: 4347322
DOCUMENT-IDENTIFIER: US 4347322 A

TITLE: Chromatographic process for enzyme purification

DATE-ISSUED: August 31, 1982

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Johnson; Richard A.	Clinton	IA		
Lloyd; Norman E.	Clinton	IA		

US-CL-CURRENT: 435/179; 435/180, 435/201, 435/205, 435/234, 435/815

ABSTRACT:

Enzyme purification is carried out by contacting an impure liquid enzyme preparation containing enzyme and soluble impurities with an ion exchange material in a column to adsorb both the enzyme and impurities by the ion exchange material, adding an additional amount of the impure liquid enzyme preparation whereby the soluble impurities therein are preferentially adsorbed by the ion exchange material and the adsorbed enzyme is displaced from the ion exchange material to produce a purified liquid enzyme preparation containing higher enzyme activity than before purification. The purified enzyme is more highly adsorbed by ion exchange material when immobilizing the enzyme.

11 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Draw Desc | Image | KWIC

☐ 35. Document ID: US 4291123 A

L1: Entry 35 of 36 File: USPT Sep 22, 1981

US-PAT-NO: 4291123
DOCUMENT-IDENTIFIER: US 4291123 A

TITLE: Production of fructose and fructose-base syrups and means for carrying out such production

DATE-ISSUED: September 22, 1981

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Degen; Ludwig	Rome			IT
Branduzzi; Paolo	Rome			IT
Olivieri; Roberto	Rome			IT
Cimini; Nadia	Rome			IT

US-CL-CURRENT: 435/94; 435/234, 435/886

ABSTRACT:

A method is disclosed for the production of fructose and syrups containing fructose and glucose, comprising the step of contacting a solution of glucose with a micro-organism of the genus Streptomyces sp. and more particularly of the strains NRRL 11.120 and NRRL 11.121, as designated by the Northern Regional Research Center, U.S. Department of Agriculture, Peoria, Ill.

1 Claims, 0 Drawing figures
Exemplary Claim Number: 1

☐ 36. Document ID: US 3970522 A

L1: Entry 36 of 36 File: USPT Jul 20, 1976

US-PAT-NO: 3970522
DOCUMENT-IDENTIFIER: US 3970522 A

TITLE: Method for the production of D-ribose

DATE-ISSUED: July 20, 1976

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sasajima; Ken-ichi	Hyogo			JA
Doi; Muneharu	Osaka			JA
Fukuhara; Teruo	Osaka			JA
Yokota; Akira	Kyoto			JA
Nakao; Yoshio	Osaka			JA
Yoneda; Masahiko	Kobe			JA

US-CL-CURRENT: 435/105; 435/832, 435/839

ABSTRACT:

D-Ribose is produced by cultivating a strain belonging to the genus Bacillus, which lacks sporulation ability or has high 2-deoxy-D-glucose-oxidizing activity or has both of these two properties and also lacks at least one of transketolase and D-ribulose phosphate 3-epimerase, to cause said strain to elaborate and accumulate a

large amount of D-ribose. The thus accumulated D-ribose can be recovered in good yield.

13 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Term	Documents
KETOL.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	331
KETOLS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	237
ISOMERASE.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	6271
ISOMERASES.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	984
CANDIDA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	16891
CANDIDAS.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	32
MICROB$	0
MICROB.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	2121
MICROBA.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	2
MICROBABRICATED.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	2
MICROBAC.DWPI,TDBD,EPAB,JPAB,USPT,PGPB.	5
(KETOL AND ISOMERASE AND (MICROB$ OR FUNG$ OR CANDIDA)).USPT,PGPB,JPAB,EPAB,DWPI,TDBD.	36

There are more results than shown above. Click here to view the entire set.

Display Format: - | Change Format

Previous Page Next Page

=> d his

```
     (FILE 'HCAPLUS' ENTERED AT 13:52:33 ON 12 NOV 2002)
L1           91 S KETOL(L)ISOMERASE
L2            8 S KETOLISOMERASE
L3         4645 S FRUCTOSE 6 PHOSPHATE
L4        39758 S GLUTAMINE
L5         8401 S GLUTAMATE DEHYDROGENASE
L6         5155 S NICOTINAMIDE ADENINE DINUCLEOTIDE
L7           76 S NITRO BLUE TETRAZOLIUM CHLORIDE
L8           49 S NITROBLUE TETRAZOLIUM CHLORIDE
L9         2389 S PHENAZINE()(METHOSULFATE OR METHOSULPHATE)

     FILE 'REGISTRY' ENTERED AT 13:57:37 ON 12 NOV 2002
L10           1 S 643-13-0
L11          20 S C6H13O9P/MF AND FRUCTOSE AND 6 AND DIHYDROGEN PHOSPHATE
L12           4 S L11 NOT (LABELED OR (D OR T)/ELS OR 11C# OR 13C# OR 14C# OR C
L13           1 S 56-85-9
L14           2 S (D-GLUTAMINE OR DL-GLUTAMINE)/CN
L15           1 S 9029-12-3
L16           1 S 53-84-9
L17           1 S 298-83-9
L18          10 S C40H30N10O6/MF
L19           4 S L18 AND 46.150.18/RID AND N4C/ES AND 8/NR
                SEL RN
L20           6 S E1-E4/CRN
L21           4 S L20 NOT (TL/ELS OR P/ELS)
L22           1 S 299-11-6
L23           1 S 7432-06-6
L24          54 S 7432-06-6/CRN
L25          22 S L24 AND S/ELS
L26          18 S L25 AND 2/NC
L27           2 S L26 AND (CH3O4S OR CH4OS)
L28           6 S L25 AND (CH3O4S OR CH4OS)
                E ISOMERASE
                E KETOLISOMERASE
                E KETOISOMERASE
L29        5065 S ?ISOMERASE?/CNS

     FILE 'HCAPLUS' ENTERED AT 14:07:25 ON 12 NOV 2002
L30        2480 S L10,L12
L31        5120 S L3 OR L30
L32       18445 S L13,L14
L33       41737 S L4 OR L32
L34        3274 S L15
L35        2131 S GLUTAMIC DEHYDROGENASE OR GLUTAMIC ACID DEHYDROGENASE OR (EC
L36       10121 S L5 OR L35 OR L34
L37       11011 S L16
L38       15051 S L6 OR L37
L39       37897 S NAD OR L38
L40         939 S L17 OR L19 OR L21
L41        3735 S NBT OR NITRO BLUE TETRAZOLIUM OR NITROBLUE TETRAZOLIUM OR NIT
L42        3935 S L7 OR L8 OR L40 OR L41
L43         996 S L22,L23,L27
L44        2717 S L9 OR L43
L45       33052 S L29
L46          81 S L1,L2 AND L45
L47       33069 S L1,L2,L45,L46
L48       39845 S L47 OR ?ISOMERASE?
L49         259 S L48 AND L31 AND L33
L50         560 S GLUCOSAMINE 6 PHOSPHATE

     FILE 'REGISTRY' ENTERED AT 14:17:24 ON 12 NOV 2002
```

Jan Delaval
Reference Librarian
Biotechnology & Chemical Library
CM1 1E07 – 703-308-4498
jan.delaval@uspto.gov

```
L51          1 S 3616-42-0
L52          7 S C6H14NO8P/MF AND GLUCO? AND 6 AND 2
L53          3 S L52 NOT (LABELED OR T/ELS OR 14C#)

     FILE 'HCAPLUS' ENTERED AT 14:18:48 ON 12 NOV 2002
L54        195 S L51,L53
L55         79 S L49 AND L50,L54
L56          1 S L55 AND L36
L57          0 S L54 AND L36
L58          3 S L50 AND L36
L59          3 S L56,L58
L60         11 S L54 AND L39
L61          2 S L54 AND L42
L62         33 S L42 AND L48
L63          0 S L61 AND L62,L60
L64          1 S L59 AND L60,L61,L62
L65         47 S L59-L62 NOT L64
               SEL DN AN 1
L66          1 S L65 AND E1-E3
L67          2 S L64,L66
               E SELITRENNIKOFF/AU
L68         79 S E4-E6
               E NAKATA M/AU
L69        104 S E3,E4
               E NAKATA MITSUNORI/AU
L70          8 S E3
L71          4 S L68-L70 AND L48
L72          5 S L67,L71 AND L1-L9,L30-L50,L54-L71
L73          2 S L68 AND L69,L70
L74          2 S L73 AND L1-L9,L30-L50,L54-L73
L75          6 S L72,L74
               SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 14:28:36 ON 12 NOV 2002
L76          8 S E1-E8
L77          7 S L10,L13,L15-L17,L22,L51
L78         11 S L76,L77

=> fil reg

FILE 'REGISTRY' ENTERED AT 14:30:48 ON 12 NOV 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 2002 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file
provided by InfoChem.

STRUCTURE FILE UPDATES:   11 NOV 2002  HIGHEST RN 473219-67-9
DICTIONARY FILE UPDATES:  11 NOV 2002  HIGHEST RN 473219-67-9

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

  Please note that search-term pricing does apply when
  conducting SmartSELECT searches.

Crossover limits have been increased.  See HELP CROSSOVER for details.

Experimental and calculated property data are now available.  See HELP
PROPERTIES for more information.  See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf
```

=> d ide can tot l78

L78 ANSWER 1 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **144941-31-1** REGISTRY
CN Isomerase, deoxyribonucleate topo-, IV (9CI) (CA INDEX NAME)
OTHER NAMES:
CN DNA topoisomerase IV
CN Topoisomerase IV
MF Unspecified
CI MAN
SR CA
LC STN Files: BIOSIS, CA, CAPLUS, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
236 REFERENCES IN FILE CA (1962 TO DATE)
3 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
238 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:291377

REFERENCE 2: 137:274015

REFERENCE 3: 137:259875

REFERENCE 4: 137:259872

REFERENCE 5: 137:258269

REFERENCE 6: 137:244553

REFERENCE 7: 137:229143

REFERENCE 8: 137:211942

REFERENCE 9: 137:196550

REFERENCE 10: 137:180316

L78 ANSWER 2 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **142805-56-9** REGISTRY
CN Isomerase, deoxyribonucleate topo-, II (9CI) (CA INDEX NAME)
OTHER NAMES:
CN DNA topoisomerase II
CN DNA topoisomerase type II
CN E.C. 5.99.1.3
CN NP170 proteins
CN Nuclear proteins, 170,000-mol.-wt.
CN Proteins, NP170 (nuclear protein, 170,000-mol.-wt.)
CN Topoisomerase II
CN Topoisomerase type II
CN Type II DNA topoisomerase
DR 143515-20-2
MF Unspecified
CI MAN
SR CA
LC STN Files: ADISNEWS, AGRICOLA, BIOBUSINESS, BIOSIS, CA, CAPLUS, CIN, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2174 REFERENCES IN FILE CA (1962 TO DATE)
40 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2178 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:294798

REFERENCE 2: 137:292153

REFERENCE 3: 137:290045

REFERENCE 4: 137:288755

REFERENCE 5: 137:288638

REFERENCE 6: 137:279211

REFERENCE 7: 137:276488

REFERENCE 8: 137:275727

REFERENCE 9: 137:275060

REFERENCE 10: 137:274899

L78 ANSWER 3 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **80449-01-0** REGISTRY
CN Isomerase, deoxyribonucleate topo- (9CI) (CA INDEX NAME)
OTHER NAMES:
CN Deoxyribonucleate topoisomerase
CN Deoxyribonucleic topoisomerase
CN DNA topoisomerase
CN E.C. 5.99.1.2
CN Topoisomerase
MF Unspecified
CI MAN
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, CEN, CHEMCATS, CIN, EMBASE, PROMT, TOXCENTER, USPAT2, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
2248 REFERENCES IN FILE CA (1962 TO DATE)
33 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
2252 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:289490

REFERENCE 2: 137:284323

REFERENCE 3: 137:277783

REFERENCE 4: 137:274074

REFERENCE 5: 137:273158

REFERENCE 6: 137:260096

REFERENCE 7: 137:259200

REFERENCE 8: 137:258421

REFERENCE 9: 137:243598

REFERENCE 10: 137:242895

L78 ANSWER 4 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **9030-45-9** REGISTRY

CN Isomerase, glucosamine phosphate (glutamine-forming) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN 2-Amino-2-deoxy-D-glucose-6-phosphate ketol-isomerase
CN E.C. 2.6.1.16
CN E.C. 5.3.1.19
CN Glucosamine 6-phosphate synthase
CN Glucosamine 6-phosphate synthetase
CN Glucosamine phosphate (glutamine-forming) isomerase
CN Glucosamine phosphate isomerase (glutamine-forming)
CN Glucosamine synthase
CN Glucosamine synthetase
CN Glucosamine-fructose 6-phosphate aminotransferase
CN Glutamine-fructose 6-phosphate amidotransferase
CN Glutamine-fructose 6-phosphate aminotransferase
CN L-Glutamine fructose 6-phosphate transamidase
CN L-Glutamine-D-fructose-6-p-aminotransferase
DR 9037-57-4, 9068-84-2
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CAPLUS, EMBASE, TOXCENTER, USPATFULL

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
420 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
420 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:243932

REFERENCE 2: 137:228487

REFERENCE 3: 137:212672

REFERENCE 4: 137:198543

REFERENCE 5: 137:153261

REFERENCE 6: 137:151601

REFERENCE 7: 137:121479

REFERENCE 8: 137:105663

REFERENCE 9: 137:75748

REFERENCE 10: 137:4309

L78 ANSWER 5 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **9029-12-3** REGISTRY
CN Dehydrogenase, glutamate (nicotinamide adenine dinucleotide (phosphate)) (9CI) (CA INDEX NAME)
OTHER NAMES:
CN E.C. 1.4.1.3
CN Glutamate dehydrogenase
CN Glutamate dehydrogenase (NAD(P))
CN Glutamate dehydrogenase (NAD(P)H)
CN Glutamate dehydrogenase (nicotinamide adenine dinucleotide (phosphate))
CN Glutamic acid dehydrogenase
CN Glutamic dehydrogenase
CN L-Glutamate dehydrogenase
CN L-Glutamic acid dehydrogenase
CN NAD(P)-glutamate dehydrogenase

CN NAD(P)H-dependent glutamate dehydrogenase
MF Unspecified
CI MAN
LC STN Files: AGRICOLA, ANABSTR, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, PROMT, TOXCENTER, USPATFULL
Other Sources: EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
3270 REFERENCES IN FILE CA (1962 TO DATE)
47 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
3274 REFERENCES IN FILE CAPLUS (1962 TO DATE)

REFERENCE 1: 137:273987

REFERENCE 2: 137:259231

REFERENCE 3: 137:257403

REFERENCE 4: 137:214933

REFERENCE 5: 137:213130

REFERENCE 6: 137:183419

REFERENCE 7: 137:167154

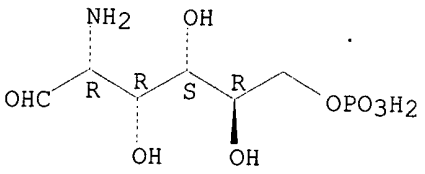
REFERENCE 8: 137:153382

REFERENCE 9: 137:152539

REFERENCE 10: 137:138963

L78 ANSWER 6 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **3616-42-0** REGISTRY
CN D-Glucose, 2-amino-2-deoxy-, 6-(dihydrogen phosphate) (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Glucosamine 6-phosphate (6CI)
OTHER NAMES:
CN 2-Amino-2-deoxy-D-glucose 6-phosphate
CN 2-Amino-2-deoxyglucose 6-phosphate
CN 2-Amino-D-glucose-6-phosphate
CN D-Glucosamine 6-phosphate
FS STEREOSEARCH
MF C6 H14 N O8 P
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CSCHEM, EMBASE, MEDLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

183 REFERENCES IN FILE CA (1962 TO DATE)
2 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
183 REFERENCES IN FILE CAPLUS (1962 TO DATE)
21 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:299942

REFERENCE 2: 137:212672

REFERENCE 3: 137:155137

REFERENCE 4: 137:151707

REFERENCE 5: 137:121479

REFERENCE 6: 137:105663

REFERENCE 7: 137:90089

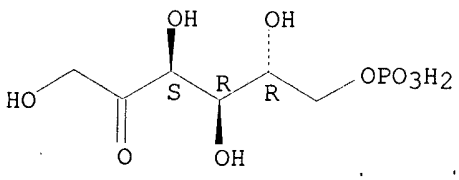
REFERENCE 8: 137:90058

REFERENCE 9: 136:314803

REFERENCE 10: 136:308625

L78 ANSWER 7 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **643-13-0** REGISTRY
CN D-Fructose, 6-(dihydrogen phosphate) (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Fructose, 6-(dihydrogen phosphate), D- (8CI)
OTHER NAMES:
CN D-Fructose 6-phosphate
CN Fructose 6-(dihydrogen phosphate)
CN Fructose 6-phosphate
FS STEREOSEARCH
MF C6 H13 O9 P
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CAOLD, CAPLUS, CASREACT, CEN, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, MRCK*, PROMT, TOXCENTER, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**, NDSL**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2463 REFERENCES IN FILE CA (1962 TO DATE)
20 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

2464 REFERENCES IN FILE CAPLUS (1962 TO DATE)
1 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:293678

REFERENCE 2: 137:293618

REFERENCE 3: 137:291794

REFERENCE 4: 137:290275

REFERENCE 5: 137:277118

REFERENCE 6: 137:260434

REFERENCE 7: 137:259176

REFERENCE 8: 137:243833

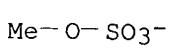
REFERENCE 9: 137:228487

REFERENCE 10: 137:212672

L78 ANSWER 8 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **299-11-6** REGISTRY
CN Phenazinium, 5-methyl-, methyl sulfate (8CI, 9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 5-Methylphenazinium methyl sulfate (6CI)
OTHER NAMES:
CN 5-N-Methylphenazonium methosulfate
CN N-Methylphenazinium methosulfate
CN N-Methylphenazinium methyl sulfate
CN N-Methylphenazonium methosulfate
CN N-Methylphenazonium methosulphate
CN Phenazine methosulfate
CN Phenazine methosulphate
CN PMS
CN PMS (pharmaceutical)
DR 3130-59-4
MF C13 H11 N2 . C H3 O4 S
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CSCHEM, DDFU, DRUGU, EMBASE, GMELIN*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NIOSHTIC, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)

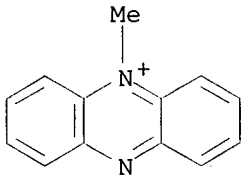
CM 1

CRN 21228-90-0
CMF C H3 O4 S



CM 2

CRN 7432-06-6
CMF C13 H11 N2



948 REFERENCES IN FILE CA (1962 TO DATE)
6 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
950 REFERENCES IN FILE CAPLUS (1962 TO DATE)
69 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:244247

REFERENCE 2: 137:181583

REFERENCE 3: 137:151611

REFERENCE 4: 137:134781

REFERENCE 5: 137:106013

REFERENCE 6: 137:105576

REFERENCE 7: 137:90569

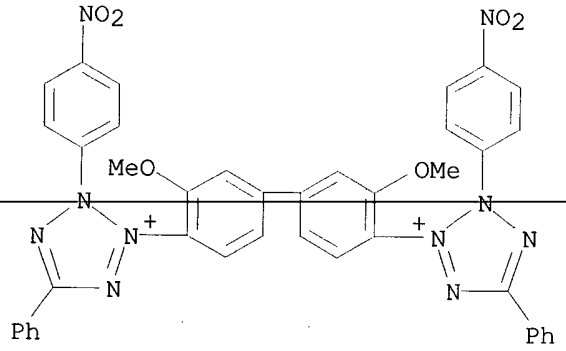
REFERENCE 8: 136:382537

REFERENCE 9: 136:368620

REFERENCE 10: 136:308980

L78 ANSWER 9 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **298-83-9** REGISTRY
CN 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy-4,4'-biphenylylene)bis[2-(p-nitrophenyl)-5-phenyl-, dichloride (8CI)
CN 3,3'-(3,3'-Dimethoxy-4,4'-biphenylylene)bis[2-(p-nitrophenyl)-5-phenyl-2H-tetrazolium chloride] (6CI)
OTHER NAMES:
CN 2,2'-Bis(p-nitrophenyl)-5,5'-diphenyl-3,3'-(3,3'-dimethoxy-4,4'-diphenylene)ditetrazolium chloride
CN 2,2'-Bis(p-nitrophenyl)-5,5'-diphenyl-3,3'-(3,3'-dimethoxy-4,4'-biphenylylene)ditetrazolium chloride
CN 2,2'-Di-p-nitrophenyl-5,5'-diphenyl-3,3'-bis(3,3'-dimethoxy-4,4'-biphenylene)ditetrazolium chloride
CN 2,2'-Dinitrophenyl-5,5'-diphenyl-3,3'-dimethoxy-4,4'-diphenylene)ditetrazolium chloride
CN 3,3'-(3,3'-Dimethoxy-4,4'-diphenylene)bis[2-(p-nitrophenyl)-5-phenyltetrazolium chloride]
CN NBT
CN NBT (dye)
CN Nitro Blue Tetrazolium
CN Nitro Blue Tetrazolium chloride
CN Nitro BT
CN Nitro Tetrazolium BT
CN Nitrotetrazolium blue

CN Nitrotetrazolium Chloride Blue
CN NTB
CN p-NBT
CN p-Nitro blue tetrazolium
CN p-Nitro blue tetrazolium chloride
CN p-Nitrotetrazolium blue
CN Tetrazolium nitro blue
CN Tetrazolium Nitro BT
DR 121287-37-4, 83800-46-8, 87714-63-4
MF C40 H30 N10 O6 . 2 Cl
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CHEMCATS, CHEMLIST, CSCHEM, CSNB, DDFU, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MSDS-OHS, PROMT, RTECS*, TOXCENTER, USPAT2, USPATFULL, VETU
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



●2 Cl⁻

920 REFERENCES IN FILE CA (1962 TO DATE)
11 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
923 REFERENCES IN FILE CAPLUS (1962 TO DATE)
42 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:288049

REFERENCE 2: 137:213190

REFERENCE 3: 137:197361

REFERENCE 4: 137:197325

REFERENCE 5: 137:181417

REFERENCE 6: 137:180748

REFERENCE 7: 137:151611

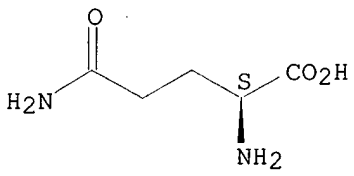
REFERENCE 8: 137:106089

REFERENCE 9: 137:105576

REFERENCE 10: 137:90569

L78 ANSWER 10 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **56-85-9** REGISTRY
CN L-Glutamine (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Glutamine, L- (8CI)
OTHER NAMES:
CN (S)-2,5-Diamino-5-oxopentanoic acid
CN .gamma.-Glutamine
CN 2-Aminoglutaramic acid
CN Cebrogen
CN Glavamin
CN Glumin
CN Glumin (amino acid)
CN Glutamic acid 5-amide
CN Glutamic acid amide
CN Glutamine
CN L-(+)-Glutamine
CN L-2-Aminoglutaramidic acid
CN L-Glutamic acid .gamma.-amide
CN Levoglutamide
CN Pentanoic acid, 2,5-diamino-5-oxo-, (S)-
CN Stimulina
FS STEREOSEARCH
DR 32640-56-5
MF C5 H10 N2 O3
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, AQUIRE, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMINFORMRX, CHEMLIST, CIN, CSCHEM, DDFU, DETHERM*, DIOGENES, DRUGU, EMBASE, GMELIN*, HODOC*, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PROMT, RTECS*, SYNTHLINE, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

18201 REFERENCES IN FILE CA (1962 TO DATE)
340 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
18223 REFERENCES IN FILE CAPLUS (1962 TO DATE)
6 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:299944

REFERENCE 2: 137:296464

REFERENCE 3: 137:294159

REFERENCE 4: 137:294154

REFERENCE 5: 137:293966

REFERENCE 6: 137:293869

REFERENCE 7: 137:293691

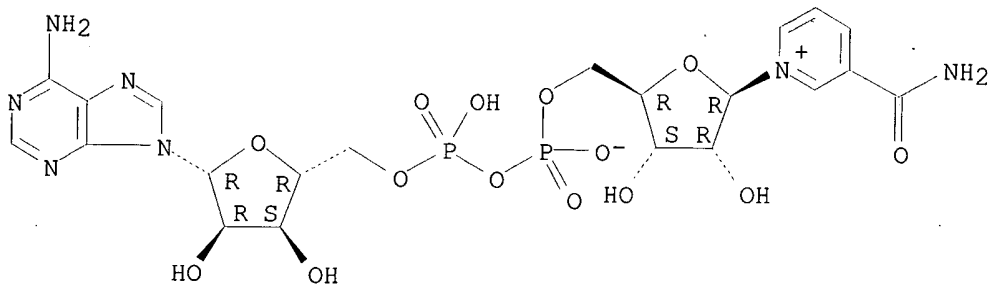
REFERENCE 8: 137:293665

REFERENCE 9: 137:292920

REFERENCE 10: 137:292815

L78 ANSWER 11 OF 11 REGISTRY COPYRIGHT 2002 ACS
RN **53-84-9** REGISTRY
CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium hydroxide, inner salt
CN Pyridinium, 3-carbamoyl-1-.beta.-D-ribofuranosyl-, hydroxide, 5'.fwdarw.5'-ester with adenosine 5'-(trihydrogen pyrophosphate), inner salt (8CI)
OTHER NAMES:
CN .beta.-Diphosphopyridine nucleotide
CN .beta.-NAD
CN .beta.-NAD+
CN .beta.-Nicotinamide adenine dinucleotide
CN Adenine-nicotinamide dinucleotide
CN Codehydrase I
CN Codehydrogenase I
CN Coenzyme I
CN Cozymase I
CN Diphosphopyridine nucleotide
CN DPN
CN Enzopride
CN NAD
CN NAD+
CN Nadide
CN Nicotinamide-adenine dinucleotide
CN Oxidized diphosphopyridine nucleotide
FS STEREOSEARCH
DR 30429-30-2, 159929-29-0
MF C21 H27 N7 O14 P2
CI COM
LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CABA, CANCERLIT, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS, CHEMLIST, CIN, CSCHEM, DDFU, DIOGENES, DRUGU, EMBASE, IFICDB, IFIPAT, IFIUDB, IPA, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT, NIOSHTIC, PIRA, PROMT, RTECS*, TOXCENTER, USAN, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**, WHO
(**Enter CHEMLIST File for up-to-date regulatory information)

Absolute stereochemistry.



10889 REFERENCES IN FILE CA (1962 TO DATE)
448 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
10901 REFERENCES IN FILE CAPLUS (1962 TO DATE)
129 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

REFERENCE 1: 137:293678

REFERENCE 2: 137:293618

REFERENCE 3: 137:291459

REFERENCE 4: 137:290898

REFERENCE 5: 137:290860

REFERENCE 6: 137:290159

REFERENCE 7: 137:275523

REFERENCE 8: 137:275383

REFERENCE 9: 137:275382

REFERENCE 10: 137:274910

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 14:30:59 ON 12 NOV 2002
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

FILE COVERS 1907 - 12 Nov 2002 VOL 137 ISS 20
FILE LAST UPDATED: 11 Nov 2002 (20021111/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

CAS roles have been modified effective December 16, 2001. Please check your SDI profiles to see if they need to be revised. For information on CAS roles, enter HELP ROLES at an arrow prompt or use the CAS Roles thesaurus (/RL field) in this file.

=> d all hitstr tot l75

L75 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:719921 HCAPLUS
TI In vitro and in vivo antibacterial activities of pazufloxacin mesilate, a new injectable quinolone
AU Nomura, Nobuhiko; Mitsuyama, Junichi; Furuta, Yousuke; Yamada, Hisashi; **Nakata, Mitsunori**; Fukuda, Toshiko; Yamada, Hiroshi; Takahata, Masahiro; Minami, Shinzaburo
CS R & D Lab., Toyama Chem. Co., Ltd., Japan
SO Japanese Journal of Antibiotics (2002), 55(4), 412-439
CODEN: JJANAX; ISSN: 0368-2781
PB Japan Antibiotics Research Association
DT Journal
LA Japanese
CC 10-5 (Microbial, Algal, and Fungal Biochemistry)
Section cross-reference(s): 1
AB We investigated the in vitro and in vivo antibacterial activities of pazufloxacin mesilate (PZFX mesilate), a new injectable quinolone. (1) The MIC50 and MIC90 values of PZFX against clin. isolated Gram-pos. and -neg. bacteria, ranged from 0.0125 to 12.5 .mu.g/mL and 0.025 to 100 .mu.g/mL, resp. PZFX showed broad spectrum activity. The antibacterial activities of PZFX against quinolone-susceptible, methicillin-resistant Staphylococcus aureus, .beta.-lactamase-neg., ampicillin-resistant Haemophilus influenzae, extended spectrum .beta.-lactamase possessing Klebsiella pneumoniae and imipenem/cilastatin (IPM/CS)-resistant Pseudomonas aeruginosa were superior to those of ceftazidime (CAZ), ceftriaxone, IPM/CS, meropenem, and panipenem/betamipron. (2) PZFX showed superior bactericidal activity against S. aureus, Escherichia coli, Proteus mirabilis, Serratia marcescens and P. aeruginosa to those of CAZ and IPM/CS after treatment for 15 min at the drug concn. equiv. to that in human serum at clin. dose to be continued for 15 min. (3) CAZ and IPM/CS had no bactericidal activity at the 16 times of MIC against P. aeruginosa in human polymorphonuclear leukocytes, while PZFX exhibited potent bactericidal activity in a dose-dependent manner against such bacteria. (4) PZFX inhibited both DNA gyrase and **topoisomerase** IV from S. aureus at nearly the same level. PZFX showed poor inhibitory activity against **topoisomerase** II from human placenta and showed high selectivity to bacterial **topoisomerase**. (5) PZFX mesilate showed superior therapeutic activity to that of CAZ with following infection model caused by S. aureus and P. aeruginosa or each; systemic infection with cyclophosphamide-treated mice, systemic infection in mice with high challenge doses, CMC pouch infection in rat, and calculus infection in rat bladder. (6) I.v. administration of PZFX with high plasma concn. just after administration, showed more excellent therapeutic effect against the rat i.p. infection, than p.o. and s.c. administration.
ST pazufloxacin mesilate injection antimicrobial pharmacokinetics
IT INDEXING IN PROGRESS
IT Enzymes
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(DNA gyrases, from Staphylococcus aureus; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT Antibiotic resistance
Ascites
Blood serum
Calculi, urinary
Human

Neutrophil
(in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT Drug delivery systems
(injections, i.v.; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT Drug delivery systems
(injections, s.c.; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT **144941-31-1, topoisomerase** IV
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(from Staphylococcus aureus; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT 127045-41-4, Pazufloxacin
RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); PKT (Pharmacokinetics); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT **142805-56-9, topoisomerase** II
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of human; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
IT **144941-31-1, topoisomerase** IV
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(from Staphylococcus aureus; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
RN 144941-31-1 HCAPLUS
CN Isomerase, deoxyribonucleate topo-, IV (9CI) (CA INDEX NAME)

IT **142805-56-9, topoisomerase** II
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(of human; in vitro and in vivo antibacterial activities of pazufloxacin mesilate, new injectable quinolone)
RN 142805-56-9 HCAPLUS
CN Isomerase, deoxyribonucleate topo-, II (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L75 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AN 2002:508201 HCAPLUS
DN 137:290729
TI A method to assay glycoxylate cycle inhibitors for antifungals
AU **Nakata, Mitsunori; Selitrennikoff, Claude P.**
CS Discovery Laboratories, Toyama Chemical Co., Ltd., Toyama, 930-8508, Japan
SO Journal of Antibiotics (2002), 55(6), 602-604
CODEN: JANTAJ; ISSN: 0021-8820
PB Japan Antibiotics Research Association
DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 10
AB A high throughput assay was proposed to screen for antifungal inhibitors.
ST glycoxylate cycle assay isocitrate lyase malate synthase Aspergillus fumigatus
IT Aspergillus fumigatus
Glyoxylate cycle
(assay for glycoxylate cycle)
IT 85-61-0, CoA, biological studies
RL: ANT (Analyte); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(assay for glycoxylate cycle)

IT 69-78-3, DTNB
RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(assay for glycoxylate cycle)
IT 9013-48-3 9045-78-7
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(assay for glycoxylate cycle)
RE.CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Dixon, G; Biochem J 1959, V72, P3
(2) Kornberg, H; Biochem J 1966, V99, P1 HCAPLUS
(3) Lorenz, M; Nature 2001, V412, P83 HCAPLUS
(4) Reinscheid, D; Microbiology 1994, V140, P3099 HCAPLUS
(5) Riddles, P; Methods in Enzymology 1983, V91, P49 HCAPLUS
(6) Schloss, J; Biochemistry 1982, V21, P4420 HCAPLUS

L75 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AN **2002:505006** HCAPLUS
DN **137:59849**
TI Flow through assay device, diagnostic kit comprising said assay device and use of said assay device in the detection of an analyte present in a sample
IN Fannes, France
PA Bio A.R.T. Bvba, Belg.
SO PCT Int. Appl., 119 pp.
CODEN: PIXXD2
DT Patent
LA English

IC ICM G01N033-52
ICS G01N033-543; G01N033-58
CC 9-1 (Biochemical Methods)
Section cross-reference(s): 14, 15, 17, 18, 19
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002052263	A1	20020704	WO 2001-EP15385	20011221

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI EP 2000-870321 A 20001222
US 2001-266236P P 20010202

AB The present invention relates to an assay device for testing the presence of an analyte in a given sample comprising: a multilayer support whereon a first analyte-binding compd. or analyte-binding complex, able to bind said analyte present in said sample, is immobilized, whereby said analyte is able to bind a second enzyme labeled analyte-binding compd. or enzyme labeled analyte-binding complex forming a sandwich complex, whereby said sandwich complex is able to generate upon contact with a suitable pptg. substrate for said enzyme-label a colored deposit in a one step procedure. The invention also relates to a diagnostic kit or a method for the detection of an analyte in any medium. Descriptions of the app. assembly and operation are given.
ST app diagnosis immunoassay test kit enzyme antibody immobilization label; environment food allergen toxin pathogen disease
IT Proteins
RL: ANT (Analyte); ANST (Analytical study)
(A, Staphylococcal; flow through assay device, diagnostic kit

comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(A; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Absorbents
(Ap120; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Proteins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(C-reactive; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(D; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(E; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(G; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Kidney, disease
(Goodpasture's syndrome; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Coagulants
(Lupus; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Immunoglobulins
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(M; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(SSA/La; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(SSA/Ro; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Graves' disease
(Thyrotoxicosis; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Granulomatous disease
(Wegener's granulomatosis; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Drugs of abuse
(abuse of; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Poaceae
Weed
(allergy; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Antigens
RL: ADV (Adverse effect, including toxicity); PRP (Properties); BIOL (Biological study)
(autoantigens; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Anemia (disease)
(autoimmune hemolytic anemia; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Thyroid gland, disease
(autoimmune thyroiditis; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Lipoproteins
RL: ANT (Analyte); ANST (Analytical study)
(cell surface; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Connective tissue
(disease; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Lupus erythematosus
(drug induced; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Immunoassay
(enzyme, dot-blot; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Skin
(epidermis, allergens; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Addison's disease
Agriculture and Agricultural chemistry
Air analysis
Analytical apparatus
Animal
Autoimmune disease
Bacteria (Eubacteria)
Blood analysis
Blood plasma
Blood serum
Celiac disease
Centromeres
Coating materials
Diabetes insipidus
Diagnosis
Flow
Food
Food analysis
Human

Hydrophilicity
Immobilization, molecular
Labels
Lupus erythematosus
Membranes, nonbiological
Mold (fungus)
Mud
Multiple sclerosis
Myasthenia gravis
Mycobacterium
Neutrophil
Parasite
Pathogen
Rheumatic diseases
Rheumatoid arthritis
Soils
Standards, physical
Storage
Test kits
Thyroid gland
Urine analysis
Virus
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Allergens
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Toxins
RL: ADV (Adverse effect, including toxicity); BSU (Biological study, unclassified); BIOL (Biological study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Antigens
Carbohydrates, analysis
Cardiolipins
Collagens, analysis
DNA
Haptens
Histones
Immunoglobulins
RNA
Receptors
Rheumatoid factors
Ribonucleoproteins
Thyroglobulin
RL: ANT (Analyte); ANST (Analytical study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Lipids, analysis
Nucleic acids
Peptides, analysis
Proteins
RL: ANT (Analyte); ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Interleukins

RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Myoglobins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Troponins
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Agglutinins and Lectins
Avidins
Enzymes, uses
Ligands
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Antibodies
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Minerals, analysis
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Fluoropolymers, uses
Glass fibers, uses
Plastics, uses
Polyamides, uses
Polyesters, uses
Polysulfones, uses
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Animal cell
(fractions; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Purpura (disease)
(idiopathic thrombocytopenic; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Enzymes, analysis
RL: ANT (Analyte); ANST (Analytical study)
(inhibitors; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Literature
(instruction leaflet; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Diabetes mellitus
(insulin-dependent; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Fertility
(male, disorder; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Heart, disease
Inflammation
(markers of; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Antibodies
RL: ARG (Analytical reagent use); PRP (Properties); ANST (Analytical study); USES (Uses)
(monoclonal; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Hypothyroidism
(myxedema; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Antigens
RL: ANT (Analyte); ANST (Analytical study)
(nuclear antigens; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Materials
(org.; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Skin, disease
(pemphigoid; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Anemia (disease)
(pernicious anemia; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Muscle, disease
(polymyositis; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Biliary tract
(primary biliary cirrhosis; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Sjogren's syndrome
(primary; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Connective tissue
(scleroderma, CREST syndrome variant; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Connective tissue
(scleroderma; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)
IT Albumins, uses
RL: NUU (Other use, unclassified); USES (Uses)
(serum, bovine; flow through assay device, diagnostic kit comprising

said assay device and use of said assay device in detection of analyte present in a sample)

IT Eye, disease
(sympathetic ophtalmia; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Antigens
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(tumor-assocd.; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Intestine, disease
(ulcerative colitis; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Eye, disease
(uveitis, allergy; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Eye, disease
(uveitis, lens induced; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Blood vessel, disease
(vasculitis/vasculitides; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT Hepatitis
(viral, chronic active; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT **80449-01-0, Topoisomerase**
RL: ANT (Analyte); ANST (Analytical study)
(1; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 9068-78-4, Histidinyl tRNA synthetase
RL: ANT (Analyte); ANST (Analytical study)
(Jo-1; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 9003-99-0, Myeloperoxidase
RL: ANT (Analyte); ANST (Analytical study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 9001-15-4, Creatine kinase
RL: ANT (Analyte); DGN (Diagnostic use); ANST (Analytical study); BIOL (Biological study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 58-85-5, Biotin 9013-20-1, Streptavidin
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 132-32-1, 3-Amino-9 ethylcarbazole **298-83-9, Nitro blue tetrazolium** 7732-18-5, Water, analysis
9001-78-9, Alkaline phosphatase 9035-82-9, Dehydrogenase 34314-06-2, Tetramethylbenzidine 38404-93-2, 5-Bromo-4-chloro-3-indolyl phosphate 135531-54-3

RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 9004-34-6, Cellulose, uses 9004-70-0, Nitrocellulose 24937-79-9, Polyvinylidene difluoride
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 77-86-1, Tris buffer 9002-89-5D, Polyvinyl alcohol, complex with dioctyl sulfosuccinate and DMF
RL: NUU (Other use, unclassified); USES (Uses)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

IT 9002-61-3, Chorionic gonadotrophin
RL: ANT (Analyte); ANST (Analytical study)
(human; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Becton Dickinson And Company; EP 0458231 A 1991 HCAPLUS
(2) Monoclonal Antibodies Inc; EP 0125118 A 1984 HCAPLUS
(3) Nycomed Imaging As; US 5958790 A 1999 HCAPLUS

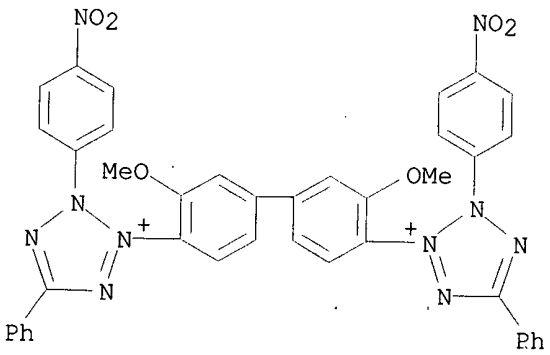
IT **80449-01-0, Topoisomerase**
RL: ANT (Analyte); ANST (Analytical study)
(1; flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

RN 80449-01-0 HCAPLUS
CN Isomerase, deoxyribonucleate topo- (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT **298-83-9, Nitro blue tetrazolium**
RL: ARU (Analytical role, unclassified); ANST (Analytical study)
(flow through assay device, diagnostic kit comprising said assay device and use of said assay device in detection of analyte present in a sample)

RN 298-83-9 HCAPLUS
CN 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride (9CI) (CA INDEX NAME)



2 Cl⁻

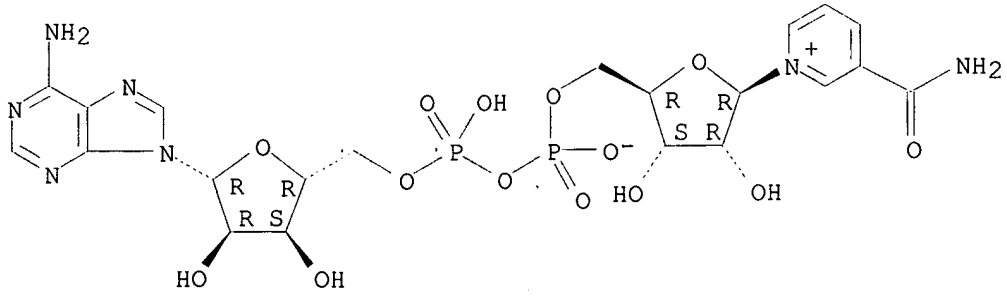
L75 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:723703 HCAPLUS
DN 136:2114
TI A novel assay for fungal **ketol-isomerase** activity
AU **Nakata, Mitsunori**; O'Rourke, Rebecca; Wilson, Shelly; Chilson, Katherine; **Selitrennikoff, Claude P.**
CS Discovery Laboratories, Toyama Chemical Co., Ltd., Toyama, 930-8508, Japan
SO Journal of Antibiotics (2001), 54(9), 737-743
CODEN: JANTAJ; ISSN: 0021-8820
PB Japan Antibiotics Research Association
DT Journal
LA English
CC 7-1 (Enzymes)
Section cross-reference(s): 10
AB 2-Deoxy-D-glucose-6-phosphate **ketol-isomerase** (E.C. 2.6.1.16) forms **glucosamine-6-phosphate** and glutamate from **fructose-6-phosphate** and **glutamine** and plays an important role in chitin synthesis in fungi. We have established a new assay for fungal **ketol-isomerase** activity that is amenable to high throughput screening to identify enzyme inhibitors. Aspergillus fumigatus crude lysate was incubated with substrates and after incubation, reactions were terminated. **Glutamate dehydrogenase, nitro blue tetrazolium chloride, phenazine methosulfate** and .beta.-**NAD** were added and the amt. of glutamate formed by **ketol-isomerase** activity was detd. by measuring OD585nm. A feedback inhibitor, UDP-N-acetylglucosamine, of fungal **ketol-isomerase** was successfully detected by this assay (IC50 = 0.48 mM). In a pilot scale screening, an active ext. from an extremophilic bacterium was found, and the ext. showed antifungal activity against A. fumigatus, Candida albicans and C. glabrata.
ST fungal glucosamine phosphate **glutamine** forming **ketol isomerase** assay
IT Aspergillus fumigatus
Candida albicans
Candida glabrata
High throughput screening
(assay for fungal **ketol-isomerase** activity)
IT **9030-45-9**, E.C. 2.6.1.16
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(assay for fungal **ketol-isomerase** activity)
IT 528-04-1
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study)
(assay for fungal **ketol-isomerase** activity)
IT **53-84-9**, .beta.-**NAD 298-83-9, Nitro blue tetrazolium chloride 299-11-6, Phenazine methosulfate**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(assay for fungal **ketol-isomerase** activity)
IT **9029-12-3, E.C. 1.4.1.3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(assay for fungal **ketol-isomerase** activity)
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Badet, B; Biochemistry 1987, V26, P1940 HCAPLUS

(2) Bradford, M; Anal Biochem 1976, V72, P248 HCAPLUS
(3) Cabib, E; Antimicrob Agents Chemother 1991, V35, P170 HCAPLUS
(4) Cassone, A; Drugs Exp Clin Res 1986, V12, P635 HCAPLUS
(5) Cheeptham, N; Thai J Biotechnol 1999, V1, P31
(6) Cheeptham, N; Thai J Biotechnol 1999, V1, P37
(7) Clark, A; New approaches for antifungal drugs 1992
(8) Cormican, M; J Antimicrob Chemother 1996, V38, P561 HCAPLUS
(9) Cox, G; Curr Opin Infect Dis 1993, V6, P422
(10) Daniels, M; J Clin Invest 1996, V97, P1235 HCAPLUS
(11) Endo, A; J Bacteriol 1970, V103, P588 HCAPLUS
(12) Etchebehere, L; Arch Biochem Biophys 1989, V272, P301 HCAPLUS
(13) Fox, J; ASM News 1993, V59, P515
(14) Katz, D; Biochim Biophys Acta 1970, V208, P452 HCAPLUS
(15) Kikuchi, H; Biochim Biophys Acta 1976, V422, P241 HCAPLUS
(16) Kornfeld, R; J Biol Chem 1967, V242, P3135 HCAPLUS
(17) Leloir, L; Biochim Biophys Acata 1953, V12, P15 HCAPLUS
(18) Lipke, P; J Bacteriol 1998, V185, P3735
(19) McCullough, J; New approaches for antifungal drugs 1992
(20) Milewski, A; Antimicrob Agents Chemother 1991, V35, P36
(21) Milewski, S; J Biol Chem 1999, V274, P4000 HCAPLUS
(22) Mio, T; J Bacteriol 1996, V178, P2416 HCAPLUS
(23) Phoebe, C; J Antibiotics 2001, V54, P56 HCAPLUS
(24) Russell, P; Mol Gen Genet 1974, V129, P77 HCAPLUS
(25) Sakurai, T; J Antibiotics 1999, V52, P508 HCAPLUS
(26) Selitrennikoff, C; Develop Biol 1976, V54, P37 HCAPLUS
(27) Van Noorden, C; Anal Biochem 1989, V176, P170 HCAPLUS
(28) Watzele, G; J Biol Chem 1989, V264, P8753 HCAPLUS
(29) White, T; Clin Microb Rev 1998, V11, P382 HCAPLUS
(30) Zalkin, H; Methods Enzymol 1985, V113, P278 HCAPLUS

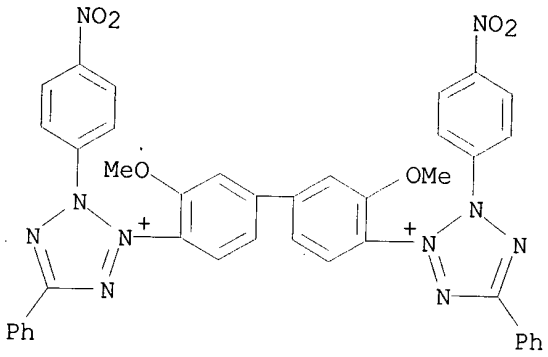
IT **9030-45-9**, E.C. 2.6.1.16
RL: ANT (Analyte); BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC (Process)
(assay for fungal **ketol-isomerase** activity)
RN 9030-45-9 HCAPLUS
CN Isomerase, glucosamine phosphate (glutamine-forming) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
IT **53-84-9**, .beta.-**NAD 298-83-9**, **Nitro blue tetrazolium chloride 299-11-6**, **Phenazine methosulfate**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(assay for fungal **ketol-isomerase** activity)
RN 53-84-9 HCAPLUS
CN Adenosine 5'-(trihydrogen diphosphate), P'.fwdarw.5'-ester with 3-(aminocarbonyl)-1-.beta.-D-ribofuranosylpyridinium, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 298-83-9 HCAPLUS
CN 2H-Tetrazolium, 3,3'-(3,3'-dimethoxy[1,1'-biphenyl]-4,4'-diyl)bis[2-(4-nitrophenyl)-5-phenyl-, dichloride (9CI) (CA INDEX NAME)

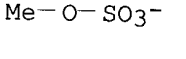


● 2 Cl^-

RN 299-11-6 HCAPLUS
CN Phenazinium, 5-methyl-, methyl sulfate (8CI, 9CI) (CA INDEX NAME)

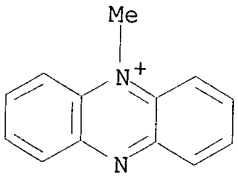
CM 1

CRN 21228-90-0
CMF C H3 O4 S



CM 2

CRN 7432-06-6
CMF C13 H11 N2



IT **9029-12-3, E.C. 1.4.1.3**
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(assay for fungal **ketol-isomerase** activity)
RN 9029-12-3 HCAPLUS
CN Dehydrogenase, glutamate (nicotinamide adenine dinucleotide (phosphate)) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L75 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AN 2001:184182 HCAPLUS
DN 134:350369
TI Extremophilic organisms as an unexplored source of antifungal compounds
AU Phoebe, Charles H., Jr.; Combie, Joan; Albert, Fred G.; Van Tran, Kim; Cabrera, Jessica; Correira, Heidi J.; Guo, Yuehua; Lindermuth, Johanna; Rauert, Nicole; Galbraith, William; **Selitrennikoff, Claude P.**
CS Waters Corporation, Milford, MA, 01757-3696, USA
SO Journal of Antibiotics (2001), 54(1), 56-65
CODEN: JANTAJ; ISSN: 0021-8820
PB Japan Antibiotics Research Association
DT Journal
LA English
CC 10-1 (Microbial, Algal, and Fungal Biochemistry)
Section cross-reference(s): 16
AB Exts. of the biomasses and fermn. broths of 217 extremophilic microorganisms isolated from a no. of locales were screened for antifungal activity using whole-cell and mechanism-based in vitro assays. Importantly, eleven broth exts. had activity against several Candida species and Aspergillus fumigatus in whole-cell in vitro assays. One broth specifically inhibited (1,3).beta.-glucan synthase activity and four specifically inhibited **ketol-isomerase** activity, suggesting a mode of action of the antifungal compd.(s) present in these exts. The ext. from one thermophile, a novel species of Pseudomonas, was fractionated, and an active compd. was purified and its structure detd. The compd. was identified as pyochelin, a previously identified iron-binding compd. with heretofore undescribed antifungal activity. To our knowledge, this is the first report demonstrating that extremophiles synthesize compds. that have antifungal activity.
ST antifungal compd extremophilic microorganism; pyochelin antifungal activity thermophilic Pseudomonas
IT Actinomadura hibisca
Aspergillus nidulans
Emericella rugulosa
Fungicides
Pseudomonas akbaalia
Streptomyces nodosus
Zalerion arboricola
(extremophilic organisms as an unexplored source of antifungal compds.)
IT Microorganism
(extremophilic; extremophilic organisms as an unexplored source of antifungal compds.)
IT 79236-62-7P, Pyochelin
RL: BAC (Biological activity or effector, except adverse); BOC (Biological occurrence); BSU (Biological study, unclassified); PUR (Purification or recovery); BIOL (Biological study); OCCU (Occurrence); PREP (Preparation)
(extremophilic organisms as an unexplored source of antifungal compds.)
IT **9030-45-9** 9037-30-3, (1,3).beta.-Glucan synthase
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(inhibition; extremophilic organisms as an unexplored source of antifungal compds.)
RE.CNT 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Adams, M; Chem Engineer News 1995, V73, P32 HCAPLUS
(2) Alexander, B; Drugs 1997, V54, P657 MEDLINE
(3) Ankenbauer, R; J Bacteriol 1988, V170(11), P5344 HCAPLUS
(4) Anon; Drugs Future 1997, V22, P1221
(5) Bow, E; British Journal of Haematology 1998, V101, P1
(6) Brock, T; ASM News 1998, V64, P137
(7) Clark, A; Approaches for Antifungal Drugs 1992, P1 HCAPLUS
(8) Combie, J; Acquisition of heat stable enzymes from thermophilic

microorganisms: peroxidases, ureases and glucose oxidase 1992, CRDEC-CR-152
(9) Combie, J; J Indust Microbiol 1996, V17, P214 HCAPLUS
(10) Cox, G; Fungal infections. Current Opinion in Infectious Diseases 1993, V6, P422
(11) Cragg, G; J Nat Prod 1997, V60, P52 HCAPLUS
(12) Denning, D; J Antimicrob Chemother 1997, V40, P611 HCAPLUS
(13) Fox, J; ASM News 1993, V59, P515
(14) Graybill, J; Clinical Infectious Diseases 1996, V22(Suppl 2), PS166
(15) Gullo, V; The discovery of natural products with therapeutic potential 1994
(16) Herbrecht, R; European Journal of Haematology 1996, V56, P12
(17) Hood, S; Journal of Antimicrobial Chemotherapy 1996, V37, P71 HCAPLUS
(18) Horikoshi, K; Superbugs 1991, P4
(19) Persidis, A; Nature Biotechnol 1998, V16, P593 HCAPLUS
(20) Polis, M; AIDS: Biology, Diagnosis, Treatment and Prevention, fourth edition 1997, P231
(21) Runnion, K; FEMS Microbial Review 1993, V11, P139 HCAPLUS
(22) Runnion, K; Microorganisms from extreme environments as source of thermally stable enzymes for removal of polyurethane aircraft coatings (Phase II), report prepared for Naval Surface Warfare Center, Silver Spring 1996, NSWCCD/TR-95/229
(23) Selitrennikoff, C; Emerging Therapeutic Targets 1999, V3, P53 HCAPLUS
(24) Shu, Y; Recent Natural Products Based Drug Development: A Pharmaceutical Industry Prospective 1998, V61, P1053 HCAPLUS
(25) Stackebrandt, E; Int J Syst Bacteriol 1994, V44, P846 HCAPLUS
(26) Stetter, K; Extremophiles: Microbiol Life in Extreme Environments 1998, P1 HCAPLUS
(27) Stevens, D; Curr Opin Anti-infective Invest Drugs 1999, V1, P306 HCAPLUS
(28) Warnock, D; Journal of Antimicrobial Chemotherapy 1998, V41, P95 HCAPLUS
(29) Wood, R; J Antibiotics 1998, V51, P665 HCAPLUS
(30) Yarden, O; Genes Development 1991, V5, P2420 HCAPLUS

IT **9030-45-9**
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(inhibition; extremophilic organisms as an unexplored source of antifungal compds.)
RN 9030-45-9 HCAPLUS
CN Isomerase, glucosamine phosphate (glutamine-forming) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L75 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2002 ACS
AN 1976:588980 HCAPLUS
DN 85:188980
TI Post-translational control of de novo cell wall formation during Blastocladiella emersonii zoospore germination. Feedback regulation of hexosamine biosynthesis
AU **Selitrennikoff, C. P.**; Sonneborn, D. R.
CS Dep. Zool., Univ. Wisconsin, Madison, Wis., USA
SO Dev. Biol. (1976), 54(1), 37-51
CODEN: DEBIAO
DT Journal
LA English
CC 10-2 (Microbial Biochemistry)
AB Uridine-5'-diphospho-N-acetylglucosamine (UDPGlcNAc), the end product of hexosamine synthesis and a substrate for chitin synthesis, reversibly inhibited the activity of only the 1st pathway-specific enzyme at concns. below that estd. to exist in the zoospore. UDPGlcNAc combined with the enzyme-**glutamine** complex in direct competition with **fructose 6-phosphate**. Uridine nucleoside phosphates, produced through the utilization of UDPGlcNAc in chitin synthesis, directly competed with the inhibitory effects of UDPGlcNAc,

whereas other nucleoside phosphates could enhance the inhibition due to UDPGlcNAc. The data are consistent with the simultaneous binding of UDPGlcNAc at 2 enzyme sites to inhibit catalysis: the substrate (**fructose 6-phosphate**) site and the uridine nucleoside phosphate site.

ST Blastocladiella hexosamine control

IT Enzymes
RL: BIOL (Biological study)
(chitin synthesis, of Blastocladiella, regulation of)

IT Hexosamines
RL: FORM (Formation, nonpreparative)
(formation of, by Blastocladiella emersonii, feedback regulation of)

IT Blastocladiella emersonii
(hexosamine formation by, feedback regulation of)

IT 528-04-1
RL: BIOL (Biological study)
(hexosamine-biosynthesis enzyme regulation by)

IT 9023-06-7 9027-51-4 9030-18-6 **9030-45-9** 9031-91-8
RL: PROC (Process)
(regulation of, by uridine diphosphoacetylglucosamine)

IT **9030-45-9**
RL: PROC (Process)
(regulation of, by uridine diphosphoacetylglucosamine)

RN 9030-45-9 HCAPLUS

CN Isomerase, glucosamine phosphate (glutamine-forming) (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

=> fil biosis
FILE 'BIOSIS' ENTERED AT 14:36:08 ON 12 NOV 2002
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)

FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 7 November 2002 (20021107/ED)

=> d all tot

L92 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:572961 BIOSIS
DN PREV200100572961
TI A novel assay for fungal **ketol-isomerase** activity.
AU **Nakata, Mitsunori**; O'Rourke, Rebecca; Wilson, Shelly; Chilson, Katherine; **Selitrennikoff, Claude P. (1)**
CS (1) MycoLogics, Inc., 4200 East Ninth Avenue, Denver, CO, 80262: claude.selitrennikoff@uchsc.edu USA
SO Journal of Antibiotics (Tokyo), (September, 2001) Vol. 54, No. 9, pp. 737-743. print.
ISSN: 0021-8820.
DT Article
LA English
SL English
AB 2-Deoxy-D-glucose-6-phosphate **ketol-isomerase** (EC 2.6.1.16) forms **glucosamine-6-phosphate** and glutamate from **fructose-6-phosphate** and **glutamine** and plays an important role in chitin synthesis in fungi. We have established a new assay for fungal **ketol-isomerase** activity that is amenable to high throughput screening

to identify enzyme inhibitors. Aspergillus fumigatus crude lysate was incubated with substrates and after incubation, reactions were terminated. **Glutamate dehydrogenase, nitro blue tetrazolium chloride, phenazine methosulfate** and beta-**NAD** were added and the amount of glutamate formed by **ketol-isomerase** activity was determined by measuring OD585nm. A feedback inhibitor, UDP-N-acetylglucosamine, of fungal **ketol-isomerase** was successfully detected by this assay (IC50=0.48 mM). In a pilot scale screening, an active extract from an extremophilic bacterium was found, and the extract showed antifungal activity against A. fumigatus, Candida albicans and C. glabrata.

CC Biochemical Studies - Proteins, Peptides and Amino Acids *10064
Biochemical Studies - Carbohydrates *10068
Enzymes - General and Comparative Studies; Coenzymes *10802
Plant Physiology, Biochemistry and Biophysics - Enzymes *51518

BC Fungi Imperfecti or Deuteromycetes 15500

IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Methods and Techniques

IT Chemicals & Biochemicals
2-deoxy-D-glucose-6-phosphate **ketol-isomerase** [EC 2.6.1.16]; Aspergillus fumigatus crude lysate; UDP-N-acetylglucosamine: feedback inhibitor; beta-**NAD**; chitin: synthesis; **fructose-6-phosphate**; **glucosamine -6-phosphate**: formation; glutamate: formation; **glutamate dehydrogenase**; **glutamine**; **nitro blue tetrazolium chloride**; **phenazine methosulfate**

IT Methods & Equipment
fungal **ketol-isomerase** activity activity: analytical method

ORGN Super Taxa
Fungi Imperfecti or Deuteromycetes: Fungi, Plantae

ORGN Organism Name
Aspergillus fumigatus (Fungi Imperfecti or Deuteromycetes); Candida albicans (Fungi Imperfecti or Deuteromycetes); Candida glabrata (Fungi Imperfecti or Deuteromycetes)

ORGN Organism Superterms
Fungi; Microorganisms; Nonvascular Plants; Plants

RN **9030-45-9** (EC 2.6.1.16)
528-04-1 (UDP-N-ACETYLGLUCOSAMINE)
53-84-9 (BETA-**NAD**)
1398-61-4 (CHITIN)
643-13-0 (**FRUCTOSE-6-PHOSPHATE**)
3616-42-0 (**GLUCOSAMINE-6-PHOSPHATE**)
11070-68-1 (GLUTAMATE)
9001-46-1Q (**GLUTAMATE DEHYDROGENASE**)
9029-11-2Q (**GLUTAMATE DEHYDROGENASE**)
9029-12-3Q (**GLUTAMATE DEHYDROGENASE**)
56-85-9Q (**GLUTAMINE**)
6899-04-3Q (**GLUTAMINE**)
298-83-9 (**NITRO BLUE TETRAZOLIUM CHLORIDE**)
299-11-6 (**PHENAZINE METHOSULFATE**)

L92 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 2001:239945 BIOSIS
DN PREV200100239945
TI Extremophilic organisms as an unexplored source of antifungal compounds.
AU Phoebe, Charles H., Jr.; Combie, Joan; Albert, Fred G.; Van Tran, Kim; Cabrera, Jessica; Correira, Heidi J.; Guo, Yuehua; Lindermuth, Johanna;

Rauert, Nicole; Galbraith, William; **Selitrennikoff, Claude P. (1)**
CS (1) MycoLogics, Inc., 4200 East Ninth Avenue, Denver, CO, 80262: claude_selitrennikoff@uchsc.edu USA
SO Journal of Antibiotics (Tokyo), (January, 2001) Vol. 54, No. 1, pp. 56-65. print.
ISSN: 0021-8820.
DT Article
LA English
SL English
AB Extracts of the biomasses and fermentation broths of 217 extremophilic microorganisms isolated from a number of locales were screened for antifungal activity using whole-cell and mechanism-based in vitro assays. Importantly, eleven broth extracts had activity against several Candida species and Aspergillus fumigatus in whole-cell in vitro assays. One broth specifically inhibited (1,3)beta-glucan synthase activity and four specifically inhibited **ketol-isomerase** activity, suggesting a mode of action of the antifungal compound(s) present in these extracts. The extract from one thermophile, a novel species of Pseudomonas, was fractionated, an active compound purified and its structure determined. The compound was identified as pyochelin, a previously identified iron-binding compound with heretofore undescribed antifungal activity. To our knowledge, this is the first report demonstrating that extremophiles synthesize compounds that have antifungal activity.
CC Enzymes - General and Comparative Studies; Coenzymes *10802
Pathology, General and Miscellaneous - Therapy *12512
Pharmacology - General *22002
Physiology and Biochemistry of Bacteria *31000
Plant Physiology, Biochemistry and Biophysics - Enzymes *51518
BC Pseudomonadaceae 06508
Fungi Imperfecti or Deuteromycetes 15500
IT Major Concepts
Enzymology (Biochemistry and Molecular Biophysics); Infection; Pharmacology
IT Chemicals & Biochemicals
antifungal compounds: antifungal; **ketol-isomerase**
ORGN Super Taxa
Fungi Imperfecti or Deuteromycetes: Fungi, Plantae; Pseudomonadaceae: Gram-Negative Aerobic Rods and Cocci, Eubacteria, Bacteria, Microorganisms
ORGN Organism Name
Aspergillus fumigatus (Fungi Imperfecti or Deuteromycetes): pathogen;
Candida spp. (Fungi Imperfecti or Deuteromycetes): pathogen;
Pseudomonas (Pseudomonadaceae): pathogen
ORGN Organism Superterms
Bacteria; Eubacteria; Fungi; Microorganisms; Nonvascular Plants; Plants

=> fil medline
FILE 'MEDLINE' ENTERED AT 14:40:42 ON 12 NOV 2002

FILE LAST UPDATED: 9 NOV 2002 (20021109/UP). FILE COVERS 1958 TO DATE.

On June 9, 2002, MEDLINE was reloaded. See HELP RLOAD for details.

MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the MeSH 2002 vocabulary. Enter HELP THESAURUS for details.

If you received SDI results from MEDLINE on October 8, 2002, these may have included old POPLINE data and in some cases duplicate abstracts. For further information on this situation, please visit NLM at: http://www.nlm.nih.gov/pubs/techbull/so02/so02_popline.html

To correct this problem, CAS will remove the POPLINE records from the MEDLINE file and process the SDI run dated October 8, 2002 again.

Customers who received SDI results via email or hard copy prints on October 8, 2002 will not be charged for this SDI run. If you received your update online and displayed answers, you may request a credit by contacting the CAS Help Desk at 1-800-848-6533 in North America or 614-447-3698 worldwide, or via email to help@cas.org

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d all tot

L97 ANSWER 1 OF 2 MEDLINE
AN **2001668600** MEDLINE
DN **21571191** PubMed ID: **11714230**
TI A novel assay for fungal **ketol-isomerase** activity.
AU Nakata M; O'Rourke R; Wilson S; Chilson K; Selitrennikoff C P
CS Discovery Laboratories, Toyama Chemical Co., Ltd. Japan.
SO JOURNAL OF ANTIBIOTICS, (2001 Sep) 54 (9) 737-43.
Journal code: 0151115. ISSN: 0021-8820.
CY Japan
DT (EVALUATION STUDIES)
Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20011121
Last Updated on STN: 20020123
Entered Medline: 20011212
AB 2-Deoxy-D-glucose-6-phosphate **ketol-isomerase** (EC 2.6.1.16) forms **glucosamine-6-phosphate** and glutamate from **fructose-6-phosphate** and **glutamine** and plays an important role in chitin synthesis in fungi. We have established a new assay for fungal **ketol-isomerase** activity that is amenable to high throughput screening to identify enzyme inhibitors. Aspergillus fumigatus crude lysate was incubated with substrates and after incubation, reactions were terminated. **Glutamate dehydrogenase, nitro blue tetrazolium chloride, phenazine methosulfate** and beta-**NAD** were added and the amount of glutamate formed by **ketol-isomerase** activity was determined by measuring OD585nm. A feedback inhibitor, UDP-N-acetylglucosamine, of fungal **ketol-isomerase** was successfully detected by this assay (IC50=0.48 mM). In a pilot scale screening, an active extract from an extremophilic bacterium was found, and the extract showed antifungal activity against A. fumigatus, Candida albicans and C. glabrata.
CT Check Tags: Human
*Antifungal Agents: PD, pharmacology
*Aspergillus fumigatus: DE, drug effects
*Aspergillus fumigatus: EN, enzymology
Aspergillus fumigatus: GD, growth & development
*Candida: DE, drug effects
Candida albicans: DE, drug effects
*Enzyme Inhibitors: PD, pharmacology
Glutamine-Fructose-6-Phosphate Transaminase (Isomerizing): AI, antagonists & inhibitors
***Glutamine-Fructose-6-Phosphate Transaminase (Isomerizing): ME, metabolism**
Microbial Sensitivity Tests: MT, methods
CN 0 (Antifungal Agents); 0 (Enzyme Inhibitors); EC 2.6.1.16 (

Glutamine-Fructose-6-Phosphate
Transaminase (Isomerizing))

L97 ANSWER 2 OF 2 MEDLINE
AN **86300183** MEDLINE
DN **86300183** PubMed ID: **3527630**
TI Anticapsin: an active site directed inhibitor of **glucosamine-6-phosphate** synthetase from Candida albicans.
AU Milewski S; Chmara H; Borowski E
SO DRUGS UNDER EXPERIMENTAL AND CLINICAL RESEARCH, (1986) 12 (6-7) 577-83.
Journal code: 7802135. ISSN: 0378-6501.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 198610
ED Entered STN: 19900321
Last Updated on STN: 19980206
Entered Medline: 19861023
AB L-beta-(2,3-epoxycyclohexanono-4)-alanine, an active fragment of the antibiotic tetaine, identical to the antimetabolite anticapsin, is a powerful inhibitor of partially purified **glucosamine-6-phosphate** synthetase (2-amino-2-deoxy-D-glucose-6-phosphate **ketol isomerase**, aminotransferring, EC 5.3.1.19) from pathogenic fungus Candida albicans. Anticapsin was demonstrated to be a competitive inhibitor of this enzyme with respect to L-**glutamine** and uncompetitive with respect to D-**fructose-6-phosphate**. Incubation of anticapsin with **glucosamine-6-phosphate** synthetase in the absence of **glutamine** led to the formation of an inactive enzyme, irreversibly modified. The inactivation obeyed saturation kinetics; the determined Kinact was 9.5 X 10(-6) M. Addition of **glutamine** protected the enzyme against inactivation by anticapsin. Reaction of anticapsin with the enzyme exhibited characteristics of affinity labelling of the **glutamine** binding site. Probably the inactivation proceeds via an alkylation of cysteine residue at the **glutamine** binding site.
CT Check Tags: Support, Non-U.S. Gov't
*Alanine: AA, analogs & derivatives
Alanine: PD, pharmacology
*Candida albicans: EN, enzymology
Diazooxonorleucine: PD, pharmacology
Glutamine: ME, metabolism
***Glutamine-Fructose-6-Phosphate Transaminase (Isomerizing): AI, antagonists & inhibitors**
Mathematics
Sulfhydryl Reagents: PD, pharmacology
*Transaminases: AI, antagonists & inhibitors
RN 28978-07-6 (anticapsin); **56-41-7 (Alanine)**; **56-85-9 (Glutamine)**; 764-17-0 (Diazooxonorleucine)
CN 0 (Sulfhydryl Reagents); EC 2.6.1. (Transaminases); EC 2.6.1.16 (**Glutamine-Fructose-6-Phosphate** Transaminase (Isomerizing))

=> d his

(FILE 'HCAPLUS' ENTERED AT 13:52:33 ON 12 NOV 2002)
L1 91 S KETOL(L)ISOMERASE
L2 8 S KETOLISOMERASE
L3 4645 S FRUCTOSE 6 PHOSPHATE
L4 39758 S GLUTAMINE
L5 8401 S GLUTAMATE DEHYDROGENASE
L6 5155 S NICOTINAMIDE ADENINE DINUCLEOTIDE

```
L7          76 S NITRO BLUE TETRAZOLIUM CHLORIDE
L8          49 S NITROBLUE TETRAZOLIUM CHLORIDE
L9        2389 S PHENAZINE()(METHOSULFATE OR METHOSULPHATE)

     FILE 'REGISTRY' ENTERED AT 13:57:37 ON 12 NOV 2002
L10          1 S 643-13-0
L11         20 S C6H13O9P/MF AND FRUCTOSE AND 6 AND DIHYDROGEN PHOSPHATE
L12          4 S L11 NOT (LABELED OR (D OR T)/ELS OR 11C# OR 13C# OR 14C# OR C
L13          1 S 56-85-9
L14          2 S (D-GLUTAMINE OR DL-GLUTAMINE)/CN
L15          1 S 9029-12-3
L16          1 S 53-84-9
L17          1 S 298-83-9
L18         10 S C40H30N10O6/MF
L19          4 S L18 AND 46.150.18/RID AND N4C/ES AND 8/NR
               SEL RN
L20          6 S E1-E4/CRN
L21          4 S L20 NOT (TL/ELS OR P/ELS)
L22          1 S 299-11-6
L23          1 S 7432-06-6
L24         54 S 7432-06-6/CRN
L25         22 S L24 AND S/ELS
L26         18 S L25 AND 2/NC
L27          2 S L26 AND (CH3O4S OR CH4OS)
L28          6 S L25 AND (CH3O4S OR CH4OS)
               E ISOMERASE
               E KETOLISOMERASE
               E KETOISOMERASE
L29       5065 S ?ISOMERASE?/CNS

     FILE 'HCAPLUS' ENTERED AT 14:07:25 ON 12 NOV 2002
L30       2480 S L10,L12
L31       5120 S L3 OR L30
L32      18445 S L13,L14
L33      41737 S L4 OR L32
L34       3274 S L15
L35       2131 S GLUTAMIC DEHYDROGENASE OR GLUTAMIC ACID DEHYDROGENASE OR (EC
L36      10121 S L5 OR L35 OR L34
L37      11011 S L16
L38      15051 S L6 OR L37
L39      37897 S NAD OR L38
L40        939 S L17 OR L19 OR L21
L41       3735 S NBT OR NITRO BLUE TETRAZOLIUM OR NITROBLUE TETRAZOLIUM OR NIT
L42       3935 S L7 OR L8 OR L40 OR L41
L43        996 S L22,L23,L27
L44       2717 S L9 OR L43
L45      33052 S L29
L46         81 S L1,L2 AND L45
L47      33069 S L1,L2,L45,L46
L48      39845 S L47 OR ?ISOMERASE?
L49        259 S L48 AND L31 AND L33
L50        560 S GLUCOSAMINE 6 PHOSPHATE

     FILE 'REGISTRY' ENTERED AT 14:17:24 ON 12 NOV 2002
L51          1 S 3616-42-0
L52          7 S C6H14NO8P/MF AND GLUCO? AND 6 AND 2
L53          3 S L52 NOT (LABELED OR T/ELS OR 14C#)

     FILE 'HCAPLUS' ENTERED AT 14:18:48 ON 12 NOV 2002
L54        195 S L51,L53
L55         79 S L49 AND L50,L54
L56          1 S L55 AND L36
L57          0 S L54 AND L36
```

```
L58           3 S L50 AND L36
L59           3 S L56,L58
L60          11 S L54 AND L39
L61           2 S L54 AND L42
L62          33 S L42 AND L48
L63           0 S L61 AND L62,L60
L64           1 S L59 AND L60,L61,L62
L65          47 S L59-L62 NOT L64
                SEL DN AN 1
L66           1 S L65 AND E1-E3
L67           2 S L64,L66
                E SELITRENNIKOFF/AU
L68          79 S E4-E6
                E NAKATA M/AU
L69         104 S E3,E4
                E NAKATA MITSUNORI/AU
L70           8 S E3
L71           4 S L68-L70 AND L48
L72           5 S L67,L71 AND L1-L9,L30-L50,L54-L71
L73           2 S L68 AND L69,L70
L74           2 S L73 AND L1-L9,L30-L50,L54-L73
L75           6 S L72,L74
                SEL HIT RN

     FILE 'REGISTRY' ENTERED AT 14:28:36 ON 12 NOV 2002
L76           8 S E1-E8
L77           7 S L10,L13,L15-L17,L22,L51
L78          11 S L76,L77
```

```
     FILE 'BIOSIS' ENTERED AT 14:31:50 ON 12 NOV 2002
                E SELITRENNIKOFF/AU
L79          80 S E2,E4-E7
                E NAKATA M/AU
L80         289 S E3-E5
                E NAKATA MIT/AU
L81           4 S E5
L82       33768 S L48
L83           2 S L79-L81 AND L82
L84         104 S L82 AND L31 AND L33
L85           1 S L84 AND L36
L86           1 S L84 AND L39
L87           1 S L84 AND L42
L88          31 S L84 AND L50,L54
L89           1 S L84 AND L9,L22,L23,L27
L90           1 S L85-L87,L89
L91           1 S L88 AND L90
L92           2 S L83,L90,L91

     FILE 'BIOSIS' ENTERED AT 14:36:08 ON 12 NOV 2002

     FILE 'MEDLINE' ENTERED AT 14:36:28 ON 12 NOV 2002
                E NAKATA M/AU
L93           1 S E3-E6,E19 AND 2001/PY AND (54 AND 9 AND 737)/SO
L94       20931 S L48
L95          30 S L94 AND L31 AND L33
L96          16 S L95 AND (L36 OR L39 OR L42 OR L9 OR L22 OR L23 OR L27 OR L50
                SEL DN AN 2 12
L97           2 S L96 AND E1-E6

     FILE 'MEDLINE' ENTERED AT 14:40:42 ON 12 NOV 2002

     FILE 'WPIX' ENTERED AT 14:40:49 ON 12 NOV 2002
L98           3 S L1,L2
```

```
L99        1704 S ?ISOMERASE?
L100       1704 S L98,L99
L101         64 S L3
                E FRUCTOSE/DCN
                E E12+ALL
L102         14 S E2
L103         17 S E4
L104          8 S L100 AND L101-L103
L105       2280 S L4
                E GLUTAMINE/DCN
                E E3+ALL
L106        800 S E2 OR 0115/DRN
L107        146 S E4
L108         91 S E6
L109          1 S E8
L110         11 S E10
L111        203 S E12
L112          0 S L104 AND L105-L111
L113          8 S L100 AND L105-L111
L114        126 S L5
L115          4 S L100 AND L114
L116       3269 S L6 OR NAD
L117         30 S L100 AND L116
L118        157 S L7,L8,L41
                E NITROBLUE/DCN
                E E4 ALL
                E NITROBLUE/DCN
                E E4+ALL
L119        186 S E2
L120         71 S E4
L121          2 S L100 AND L118-L120
L122         96 S L9
                E PHENAZINE/DCN
                E E5+ALL
L123         85 S E2
L124          1 S L100 AND L122,L123
L125         49 S L104,L113,L115,L117,L121,L124
                E SELITRENNIKOF/AU
L126          5 S E4,E5
                E NAKATA M/AU
L127        158 S E3
                E MITSUNORI N/AU
L128          1 S E2
L129        164 S L126-L128
L130          0 S L129 AND L100
```